BLM LIBRARY
88014363

Volume 2

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

Prepared for

U.S. Department of the Interior
Bureau of Land Management
Washington, D.C. 20240

January 1979

GC
85.2
.M6
W66
v.2

Under
AA551-CT8-22

Woodward-Clyde Consultants

[illegible]
[illegible]
[illegible]

4912976 ID: 88014363

Volume 2

GC
55.2
.M6
W66
v.2

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

Prepared for

U.S. Department of the Interior
Bureau of Land Management
Washington, D.C. 20240

January 1979

BUREAU OF LAND MANAGEMENT LIBRARY
Denver, Colorado
88014363

Bureau of Land Management
Library
Denver Service Center

Prepared Under
Contract AA551-CT8-22

Woodward-Clyde Consultants

TABLE OF CONTENTS

VOLUME 2

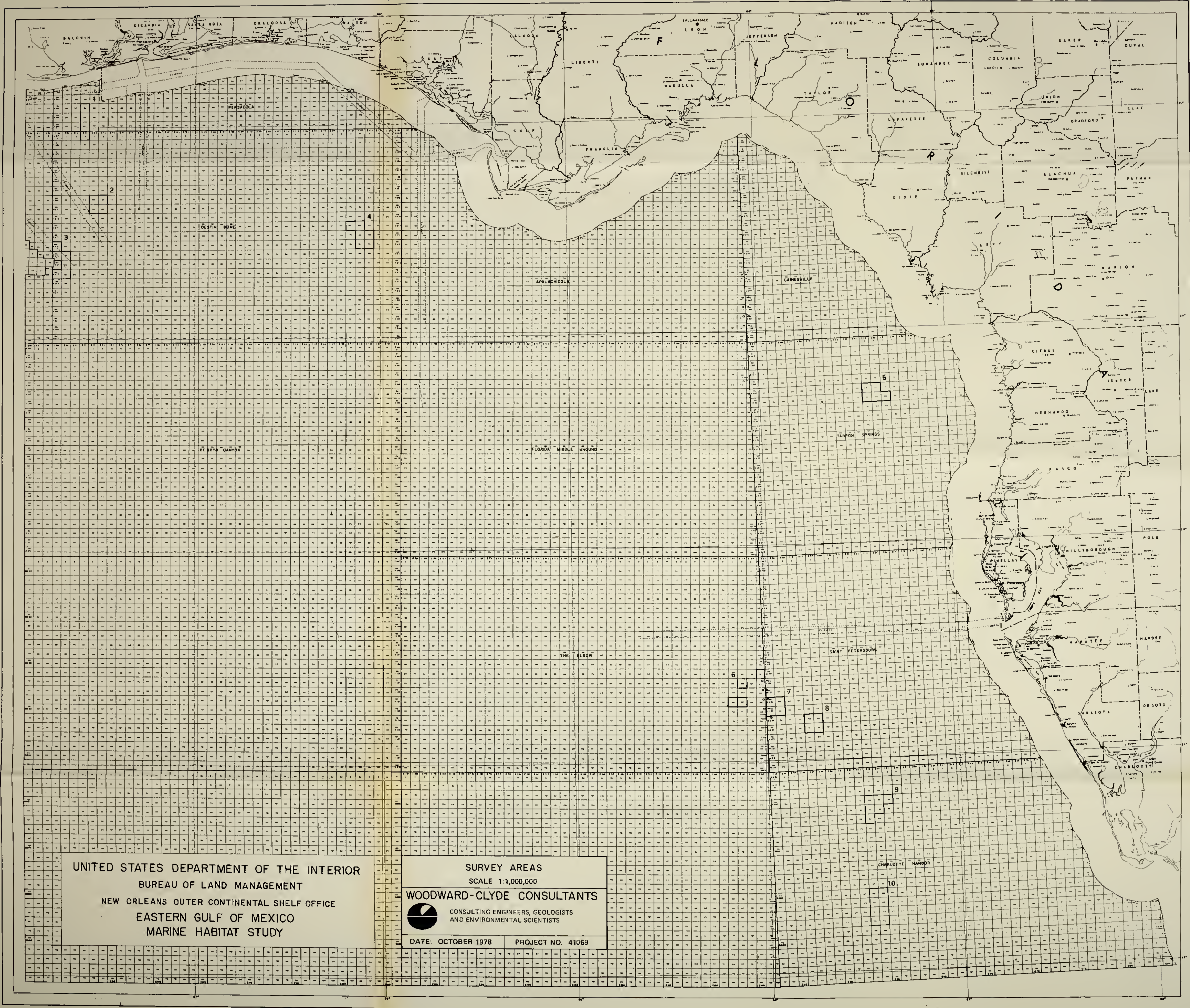
MAPS AND CROSS SECTIONS

INDEX MAP: Scale 1:1,000,000

MAP SET 1: NAVIGATION POST PLOTS, 10 sheets, SCALE 1:48,000

MAP SET 2: BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS
10 sheets, SCALE 1:48,000

GEOLOGIC CROSS SECTIONS, 3 SHEETS, SCALE 1:24,000

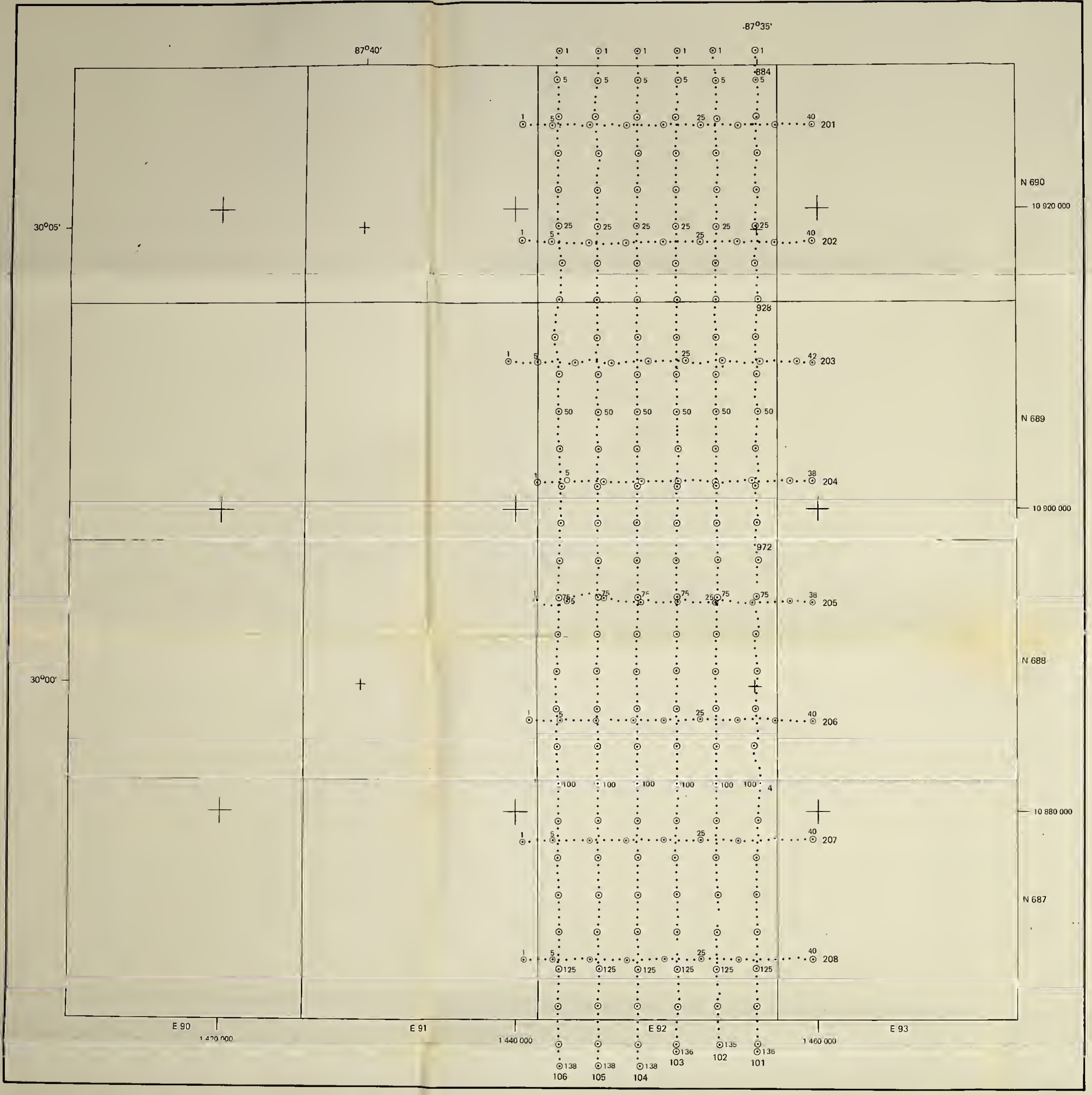


UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE
EASTERN GULF OF MEXICO
MARINE HABITAT STUDY

SURVEY AREAS
SCALE 1:1,000,000

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

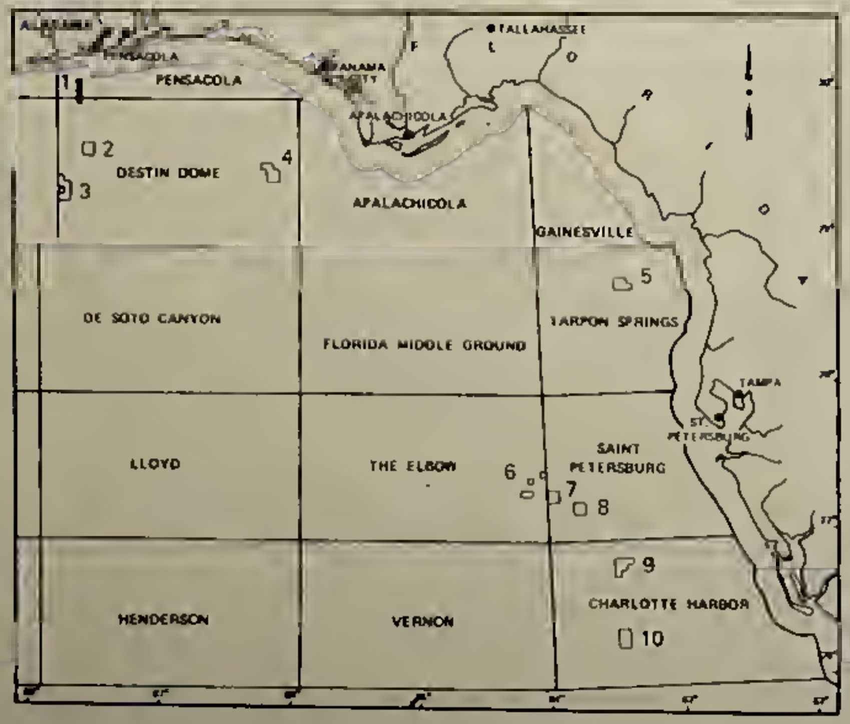
DATE: OCTOBER 1978
PROJECT NO. 41069



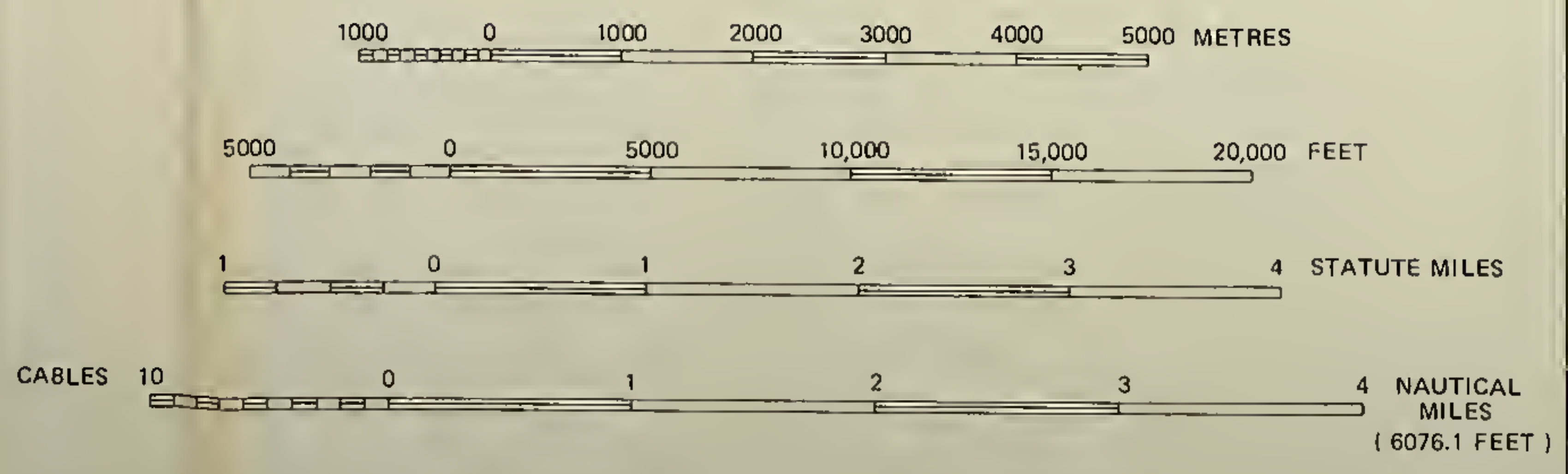
LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16, (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ⊙ • • • • ⊙ • • • • ⊙ 101 (5, 0) SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.

N



NATURAL SCALE 1:48,000


1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

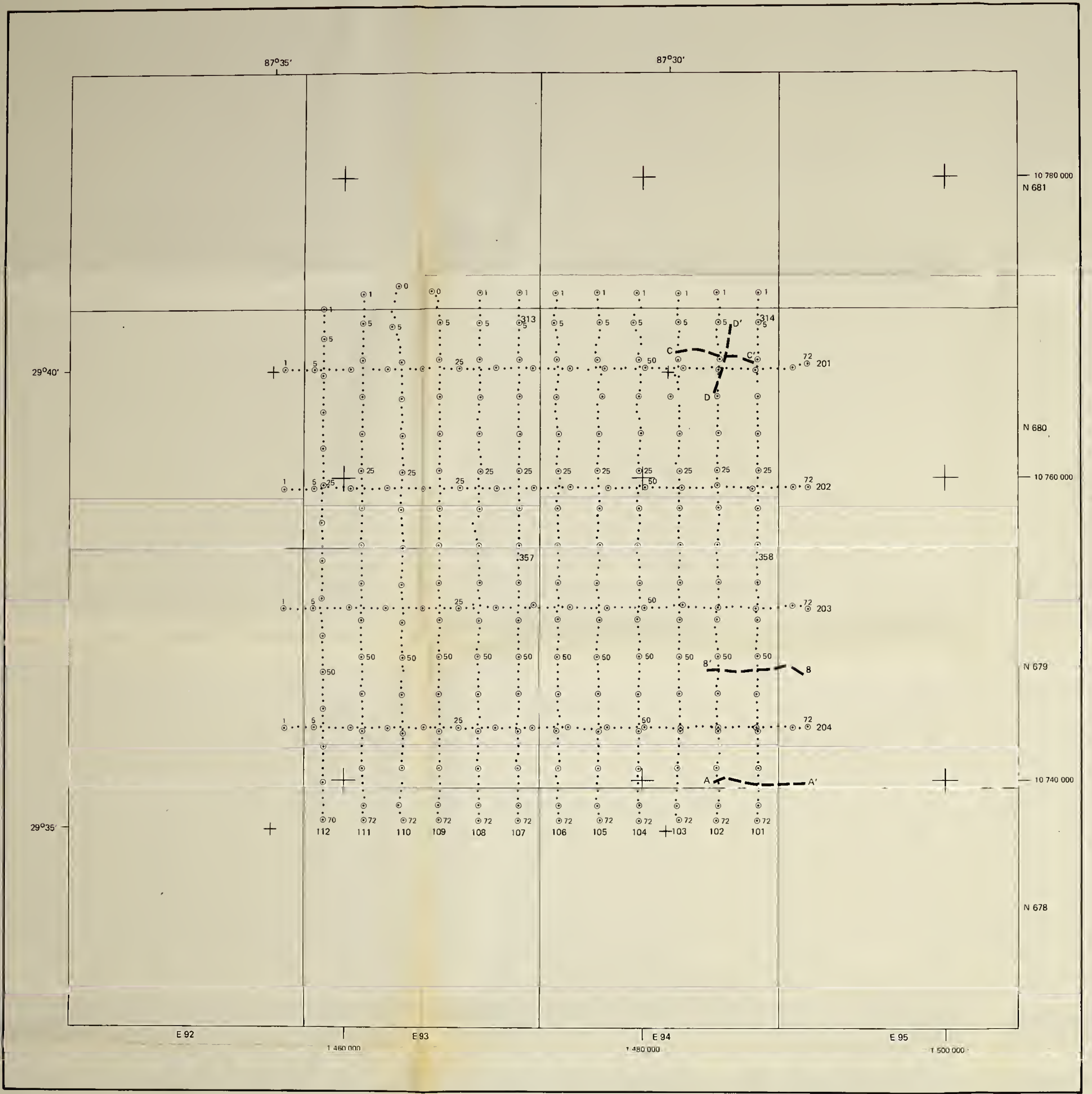
EASTERN GULF OF MEXICO MARINE HABITAT STUDY

NAVIGATION POST PLOTS

AREA:
PENSACOLA, BLOCKS 884, 928, 972
DESTIN DOME, BLOCK 4

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 1 OF 10
DATE: OCTOBER 1978
PROJECT NO. 41069

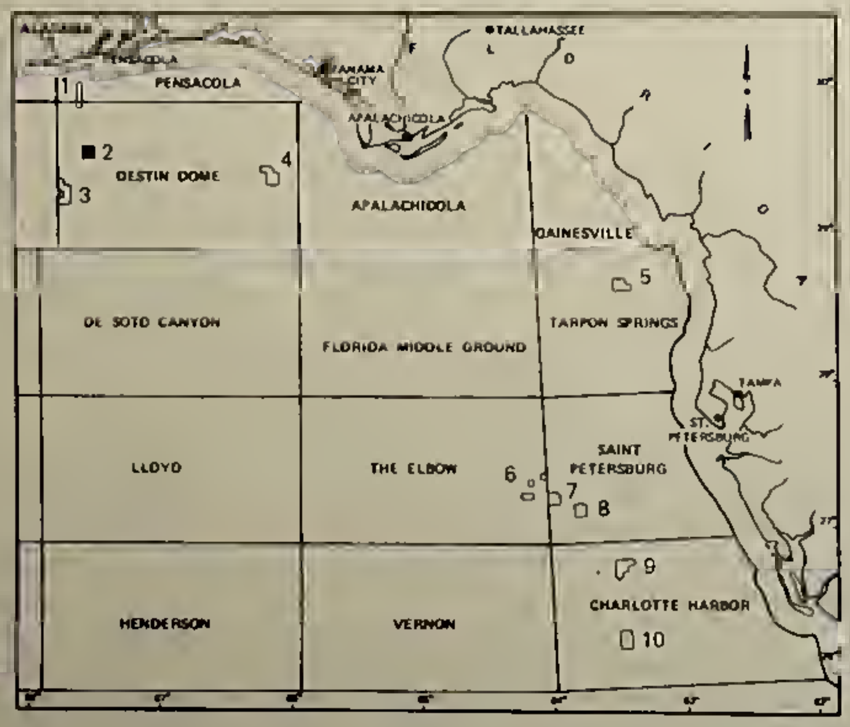


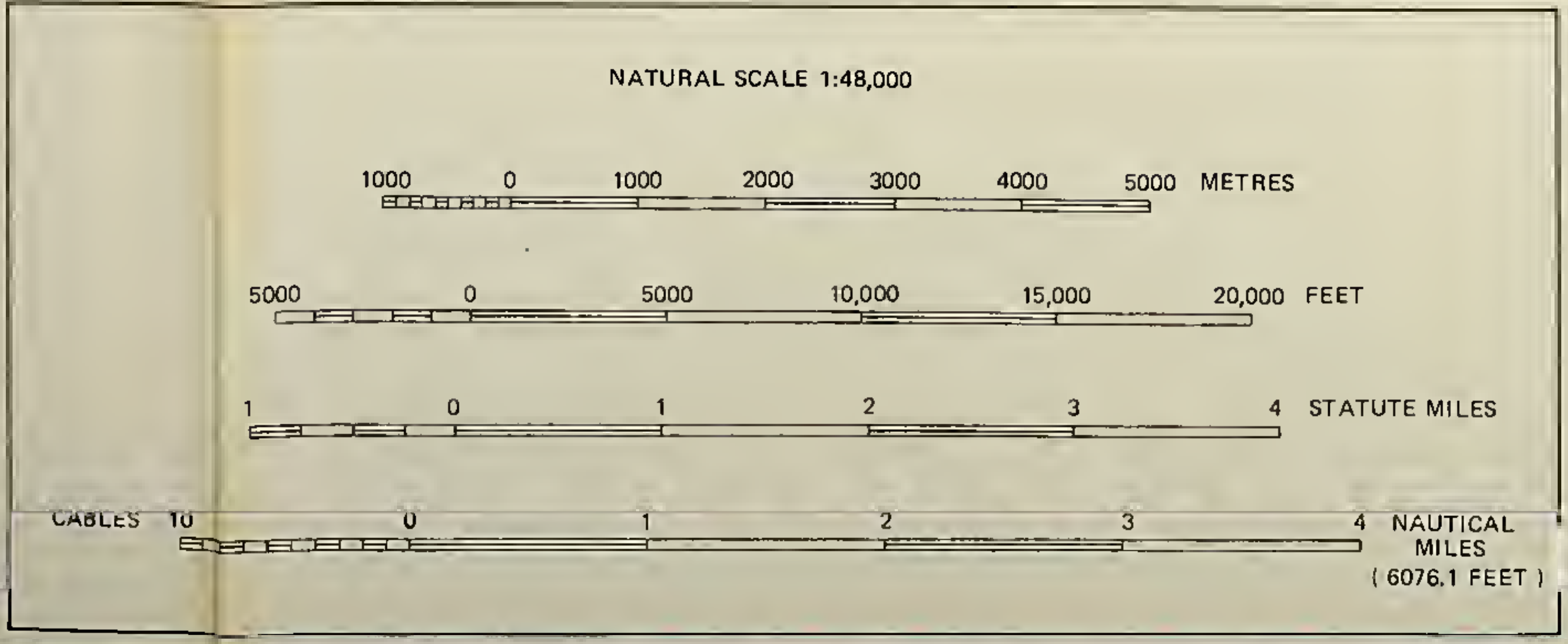
LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16 , (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. ⊙• • • •$\overset{5}{⊙}$• • • •$\overset{0}{⊙}$101 SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.

3. A — — — — A' UNDERWATER TELEVISION AND UNDERWATER CAMERA TRANSECTS.




NATURAL SCALE 1:48,000
1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

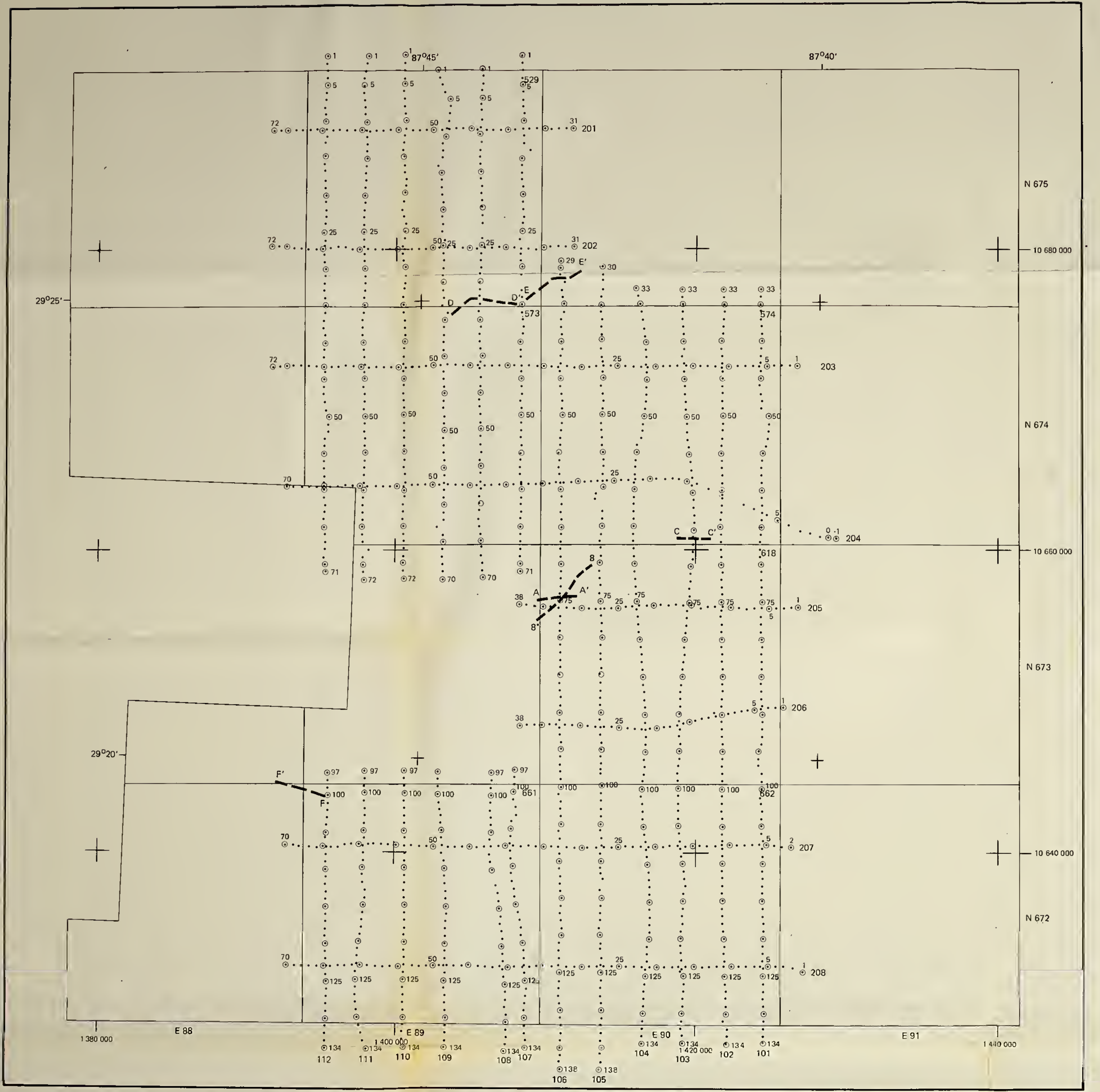
NAVIGATION POST PLOTS

AREA:
DESTIN DOME, BLOCKS 313, 314, 357, 358

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

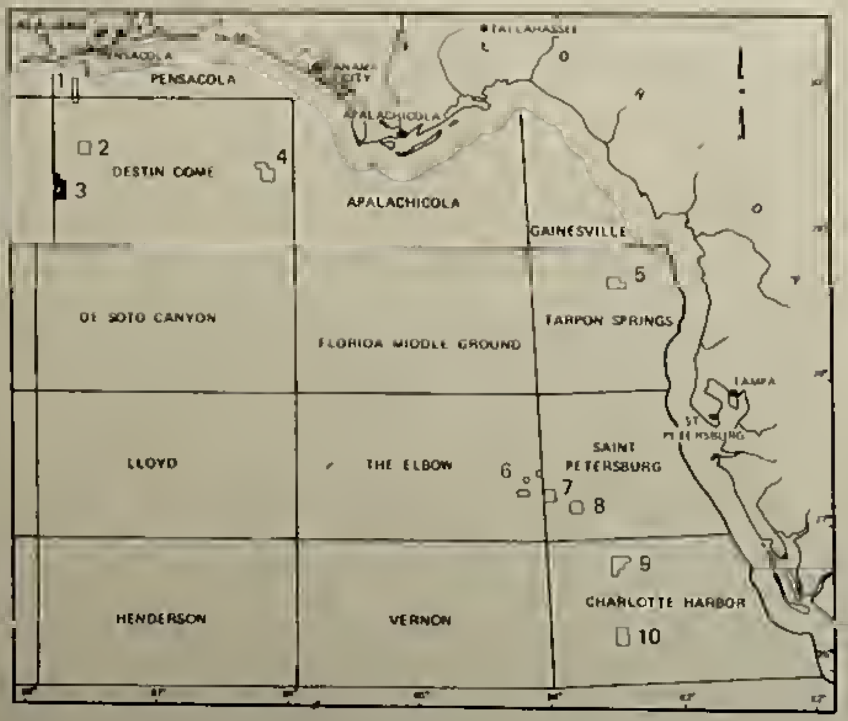
SHEET NO. 2 OF 10

DATE: OCTOBER 1978 | PROJECT NO. 41069

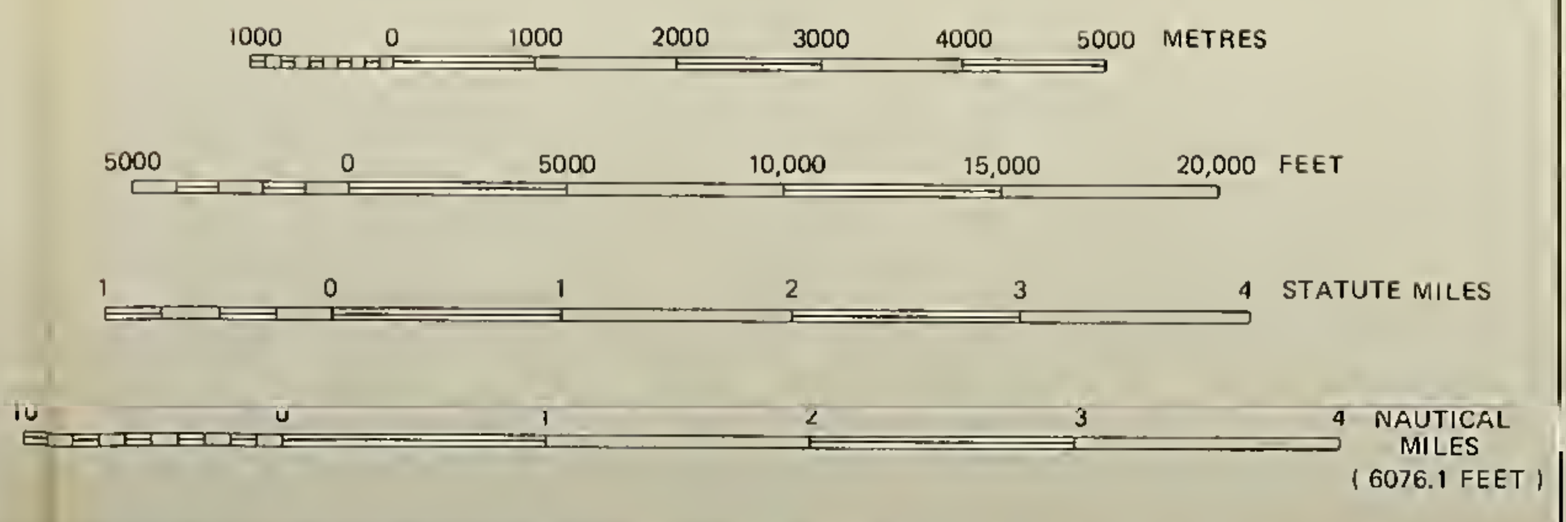


LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16 , (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ⊙ • • • • ⊙ • • • • ⊙ 101 (5, 0) SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.
3. A — — — — A' UNDERWATER TELEVISION AND UNDERWATER CAMERA TRANSECTS.



NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

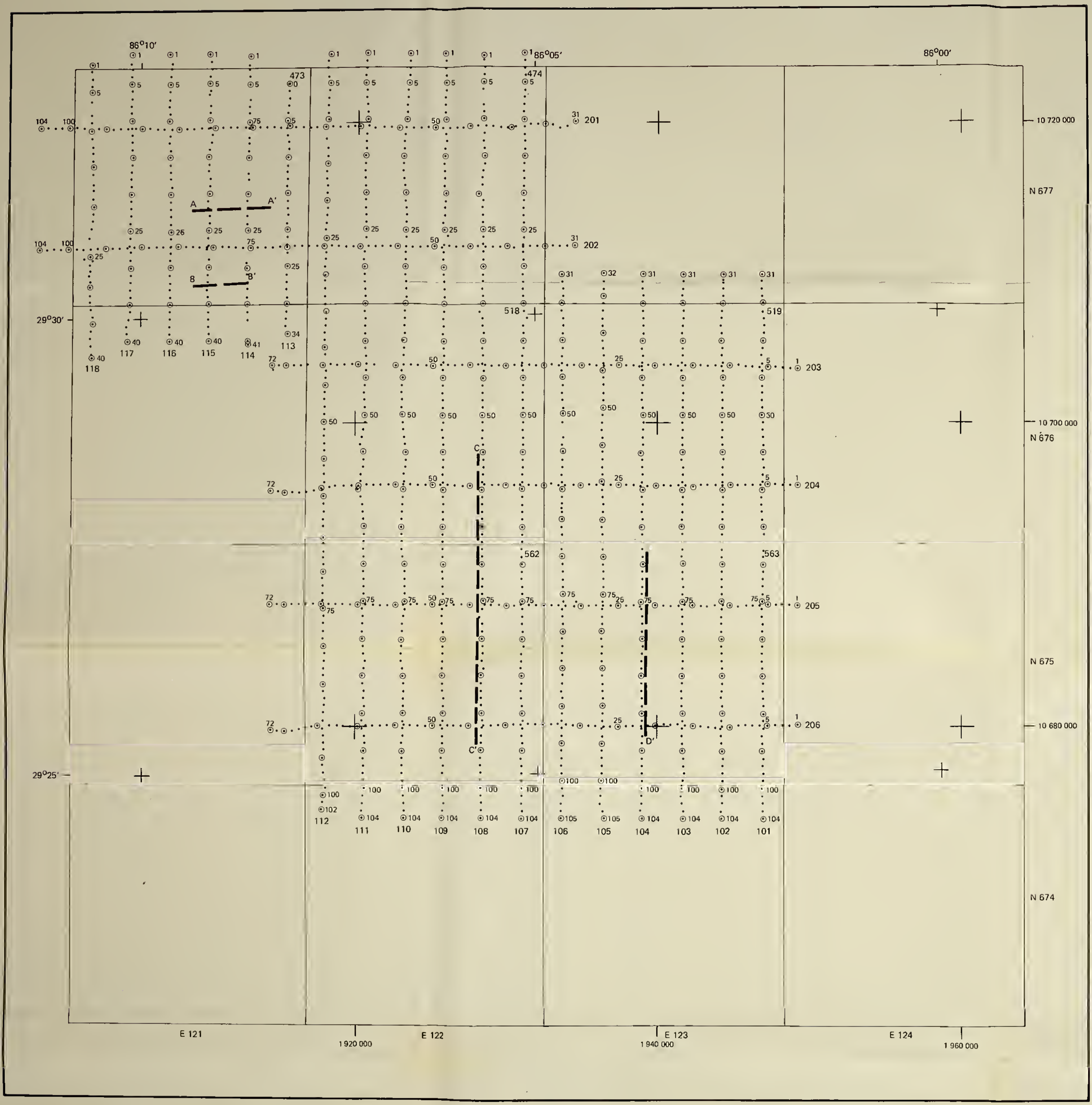
NAVIGATION POST PLOTS

AREA:
DESTIN DOME, BLOCKS, 529, 573, 574, 618, 661, 662

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 3 OF 10

DATE: OCTOBER 1978 | PROJECT NO. 41069



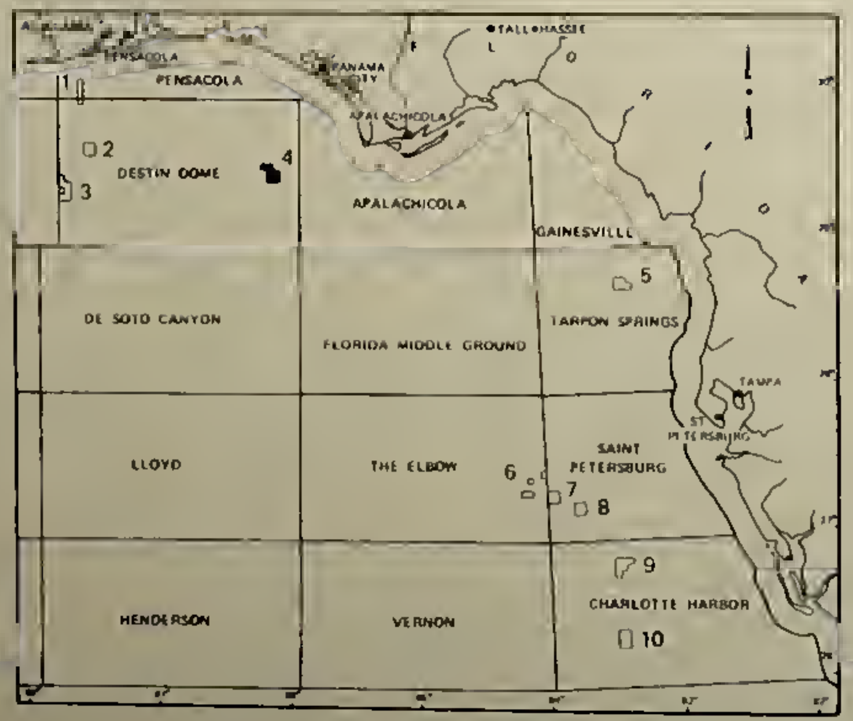
LEGEND

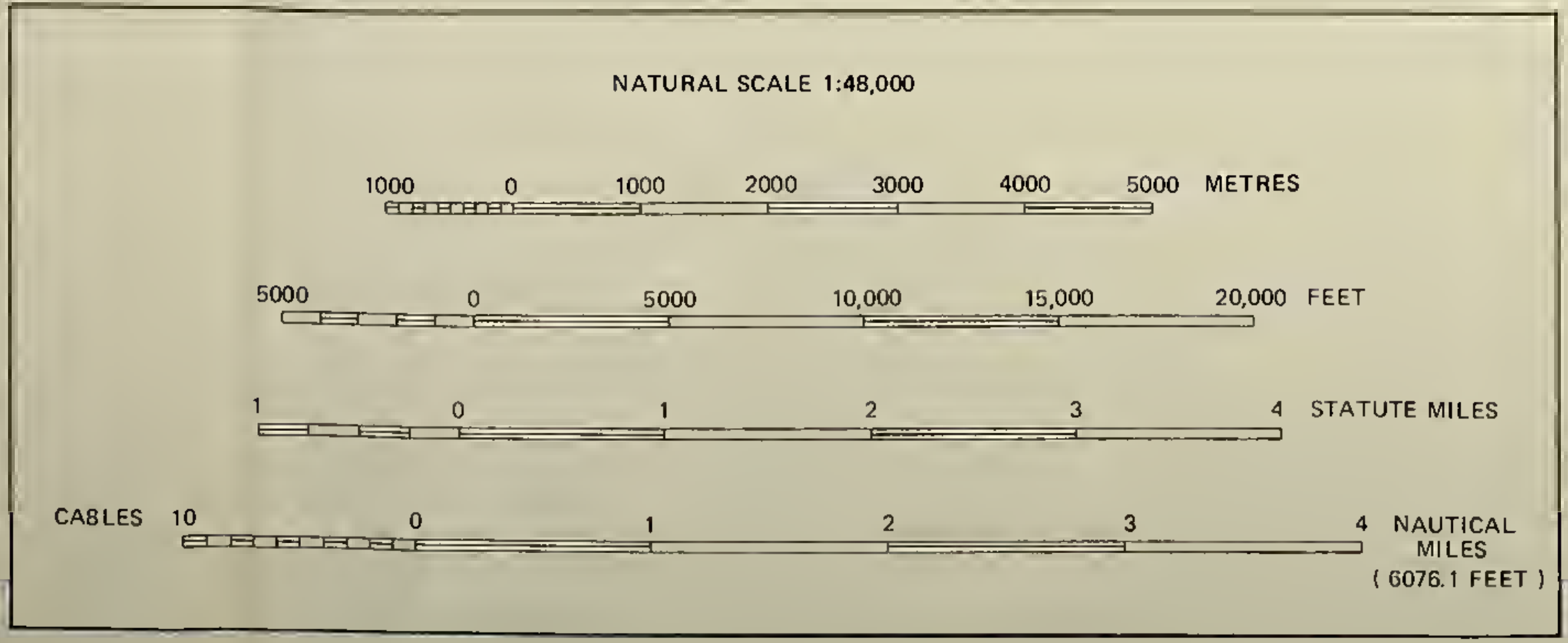
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16, (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. ⊙ • • • • ⊙ • • • • ⊙ 101 SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.

3. A ▬ ▬ ▬ A′ UNDERWATER TELEVISION AND UNDERWATER CAMERA TRANSECTS.

N




NATURAL SCALE 1:48,000
1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

NAVIGATION POST PLOTS

AREA:

DESTIN DOME, BLOCKS, 473, 474, 518, 519, 562, 563

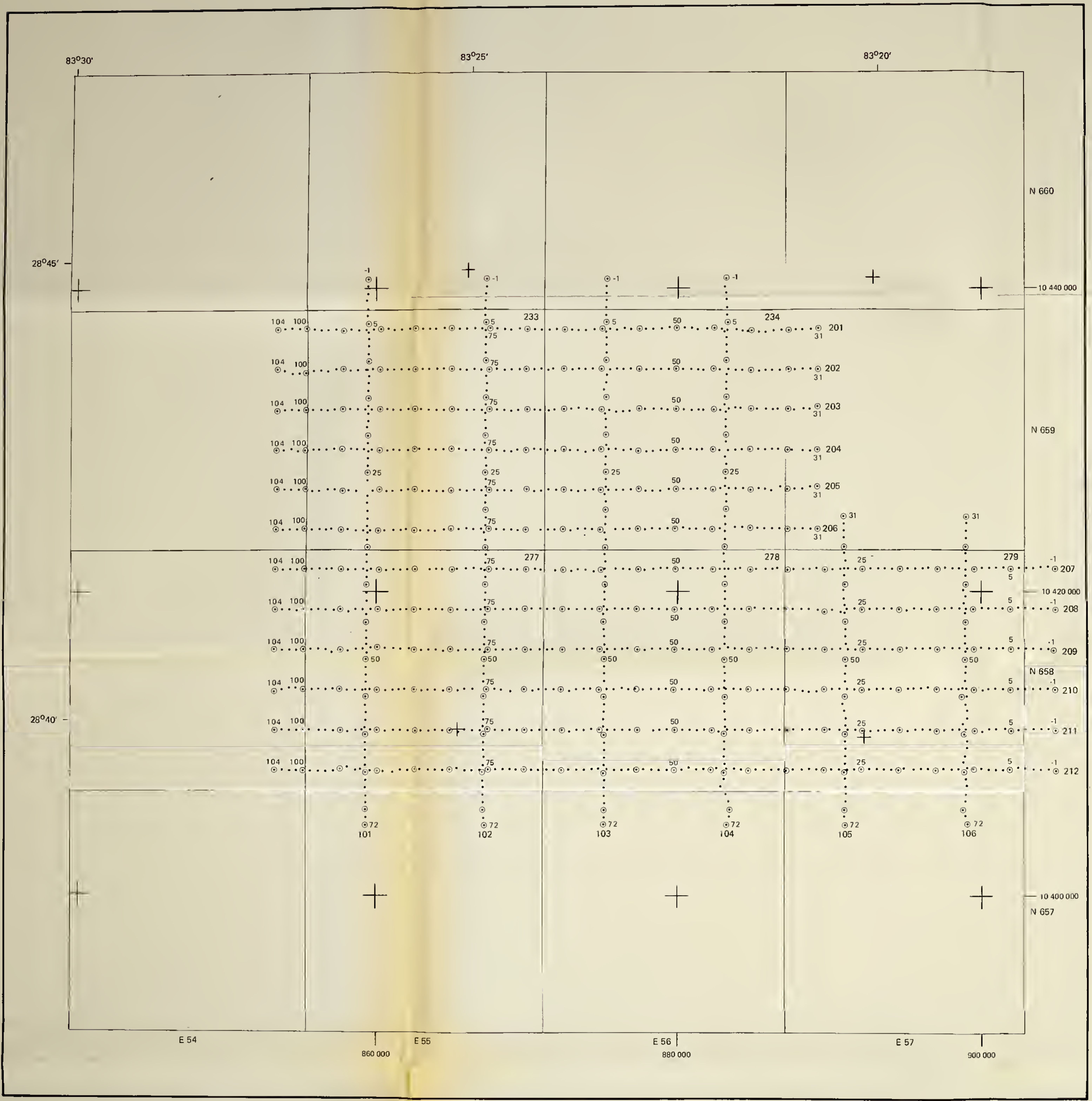
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 4 OF 10

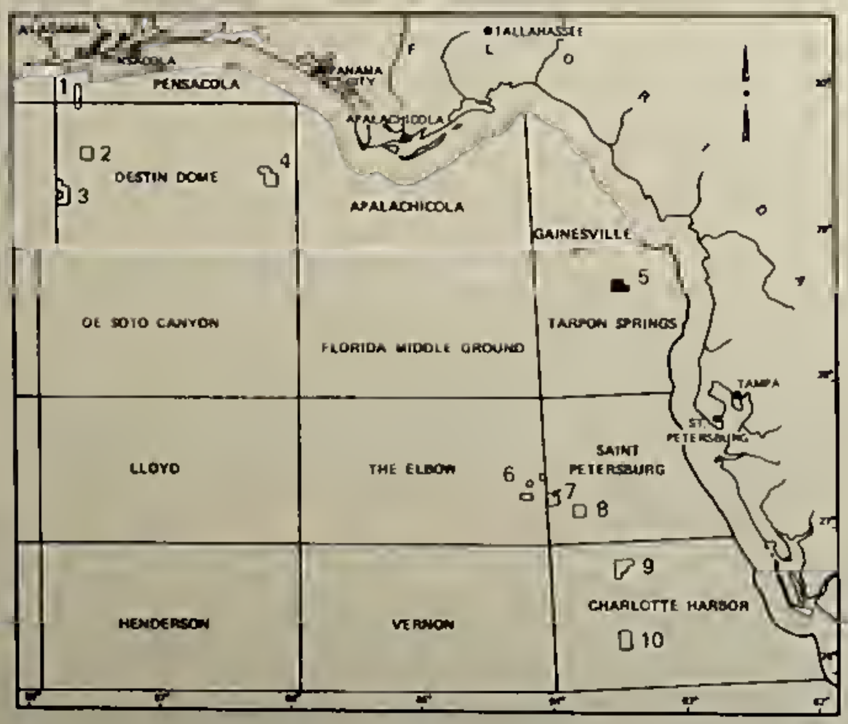
DATE: OCTOBER 1978

PROJECT NO. 41069

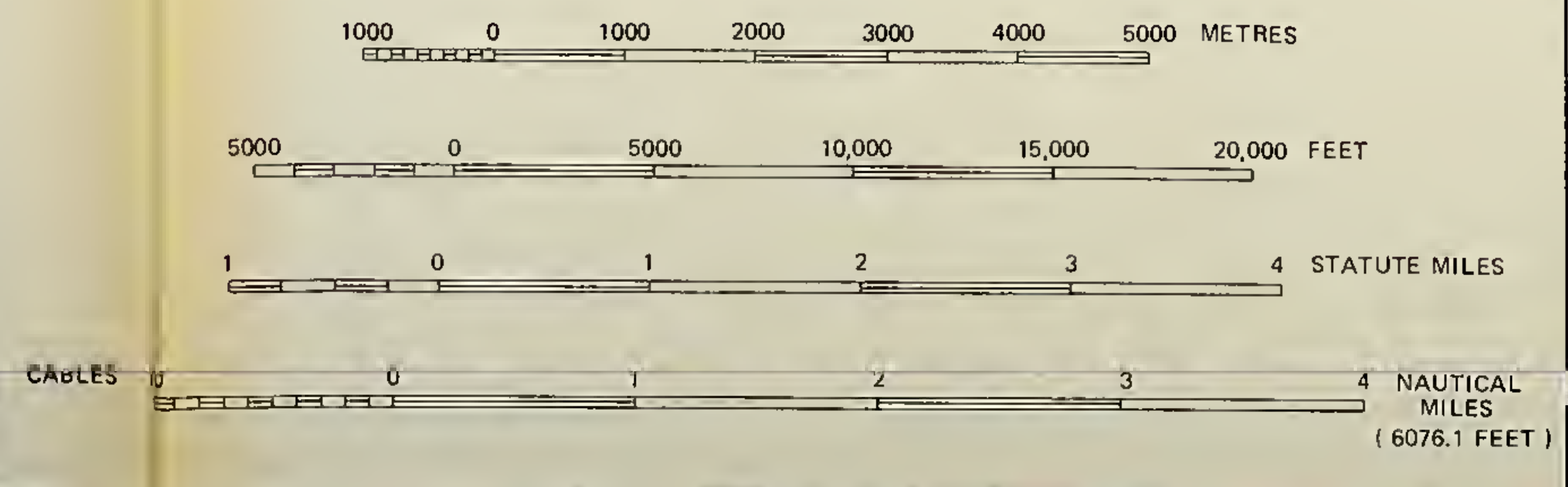


LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17 , (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ⊙•••••⊙•••••⊙101 (5, 0) SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.



NATURAL SCALE 1:48,000


1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

NAVIGATION POST PLOTS

AREA:

TARPON SPRINGS, BLOCKS 233, 234, 277, 278, 279

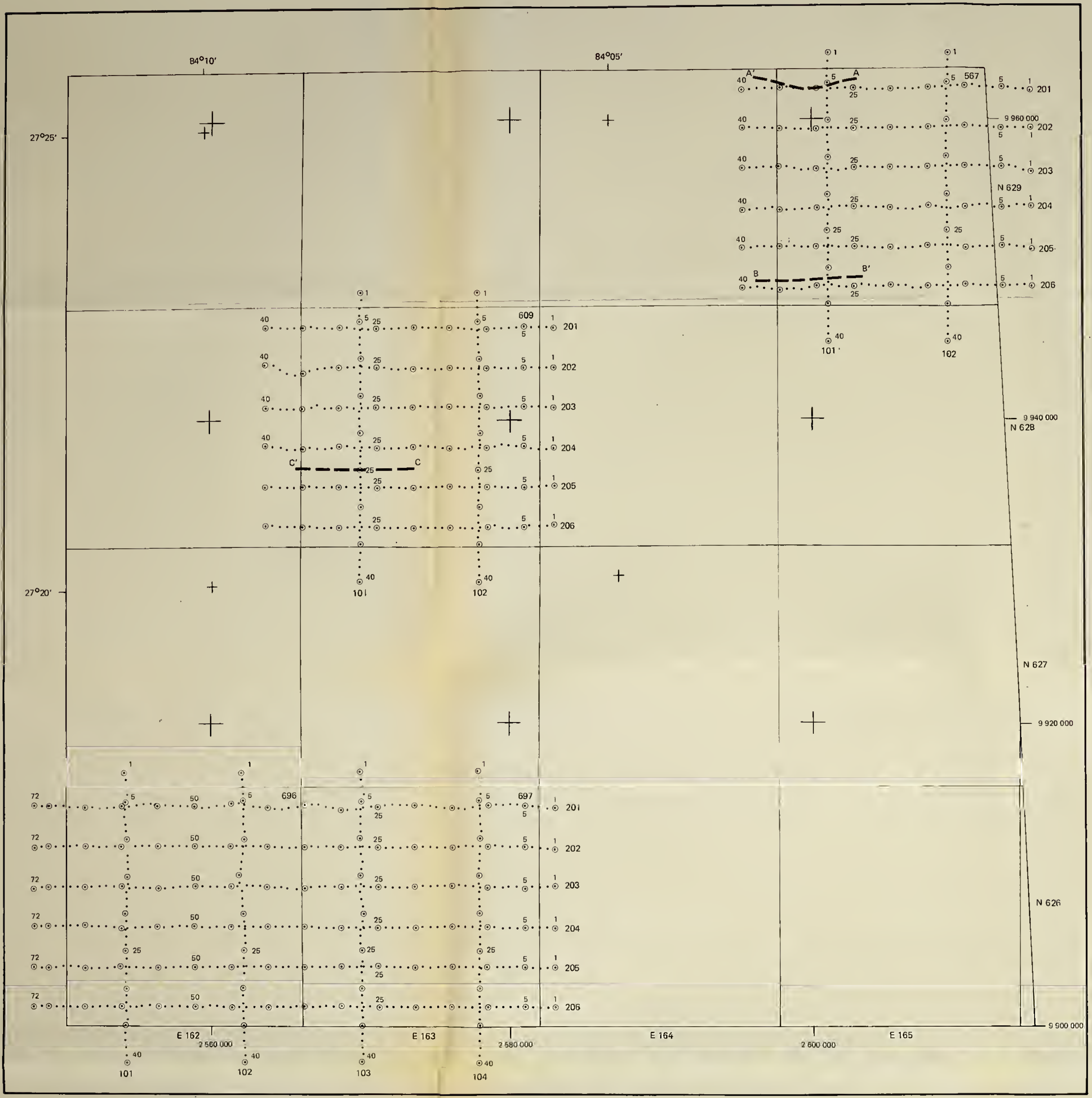
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 5 OF 10

DATE: OCTOBER 1978

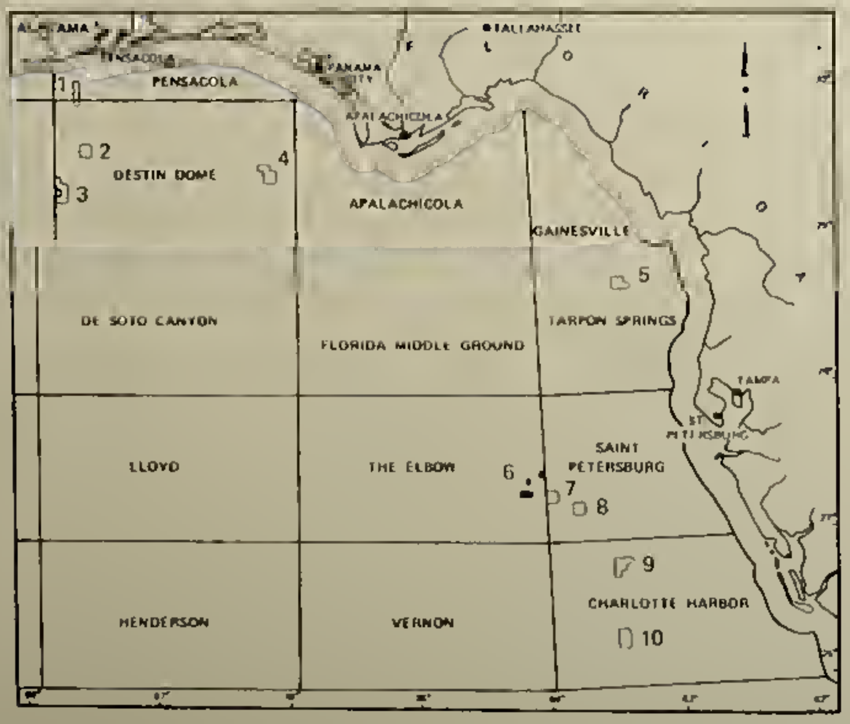
PROJECT NO. 41069

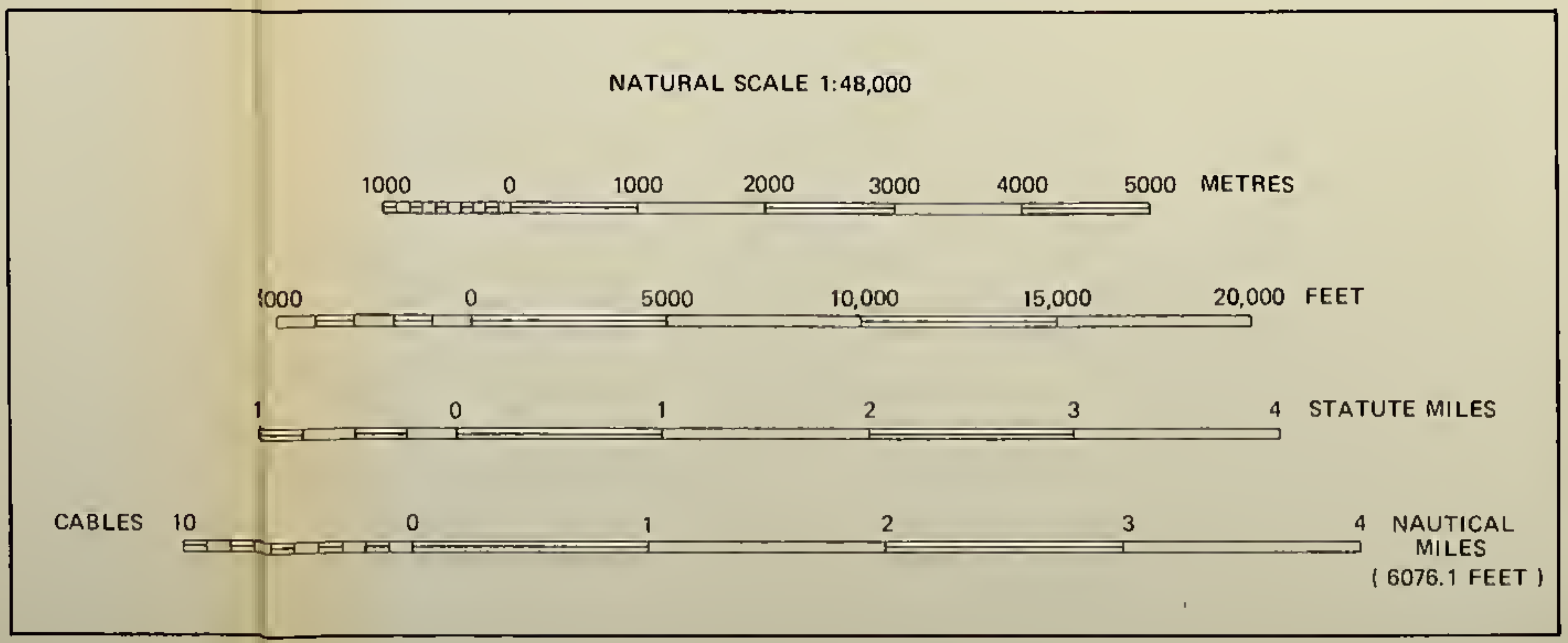


LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16 , (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ⊙ • • • • ⊙ • • • • ⊙ 101 (5, 0) SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.
3. A — — — — A' UNDERWATER TELEVISION AND UNDERWATER CAMERA TRANSECTS.

N




NATURAL SCALE 1:48,000
1000 0 1000 2000 3000 4000 5000 METRES
1000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES
(6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

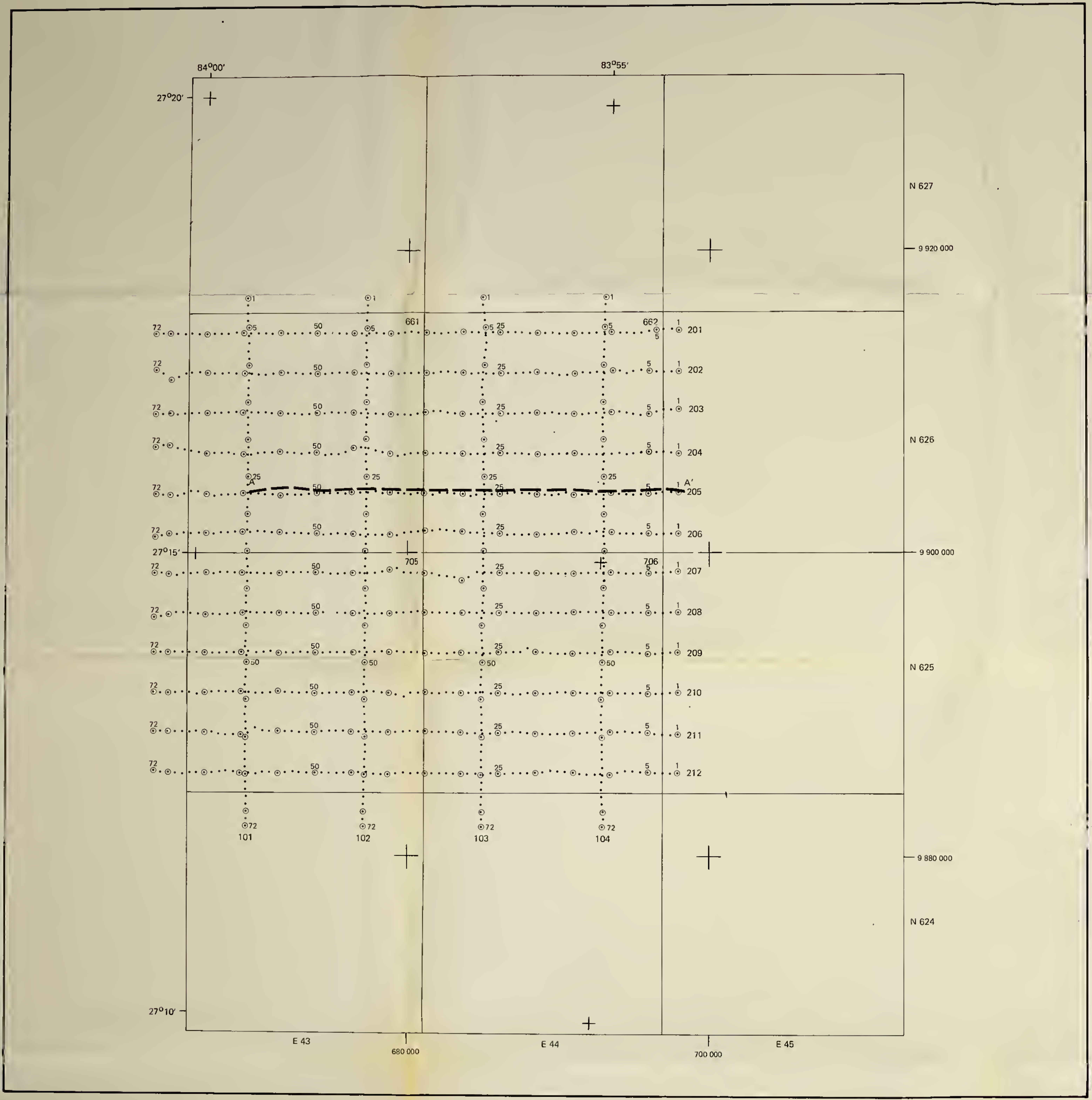
NAVIGATION POST PLOTS

AREA:
THE ELBOW, BLOCKS 567, 609, 696, 697

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

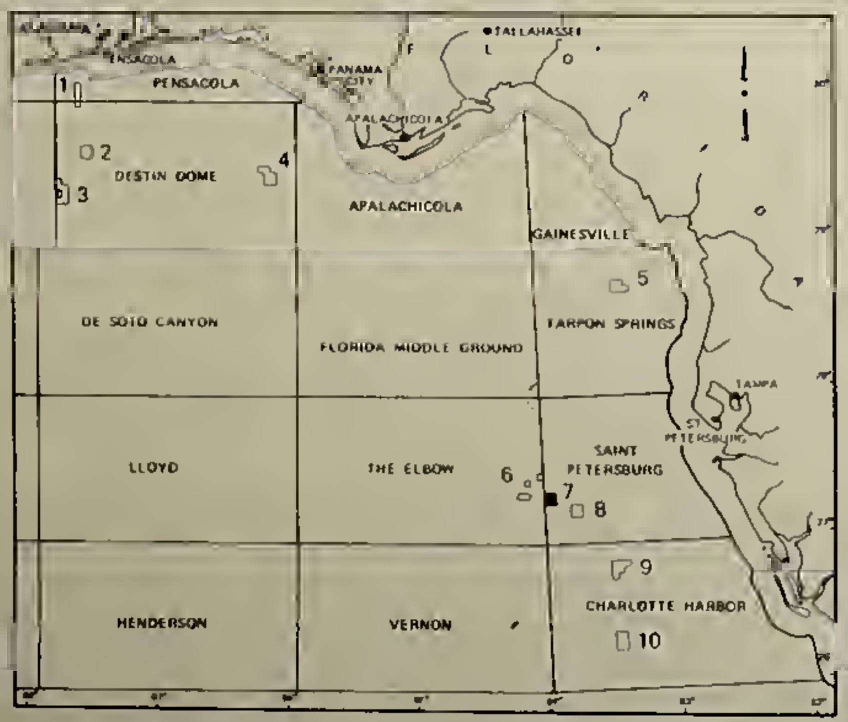
SHEET NO. 6 OF 10

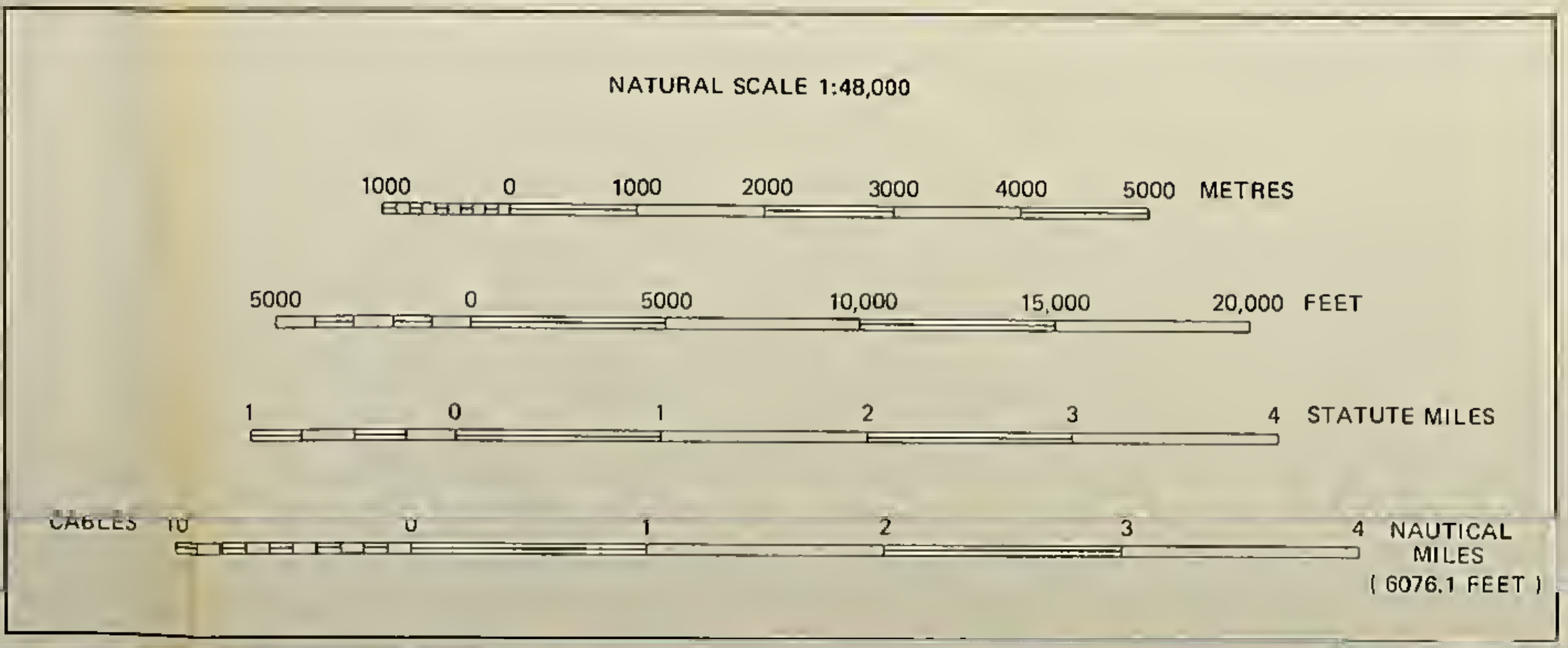
DATE: OCTOBER 1978 | PROJECT NO. 41069



LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17, (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ⊙ • • • • $\overset{5}{⊙}$ • • • • $\overset{0}{⊙}$ 101 SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.
3. A — — — A′ UNDERWATER TELEVISION AND UNDERWATER CAMERA TRANSECTS.




NATURAL SCALE 1:48,000
1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

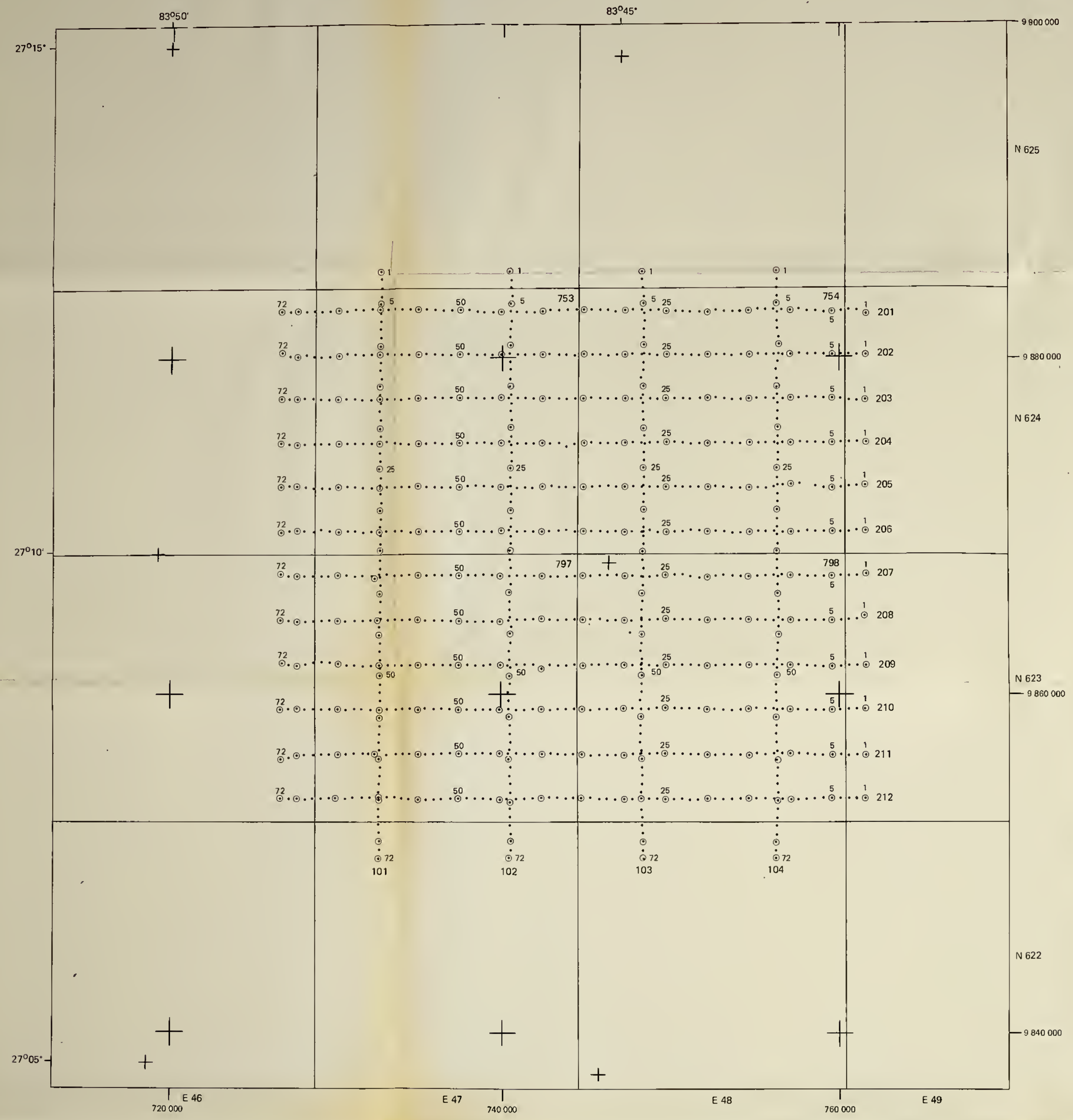
EASTERN GULF OF MEXICO MARINE HABITAT STUDY

NAVIGATION POST PLOTS

AREA:
SAINT PETERSBURG, BLOCKS, 661, 662, 705, 706

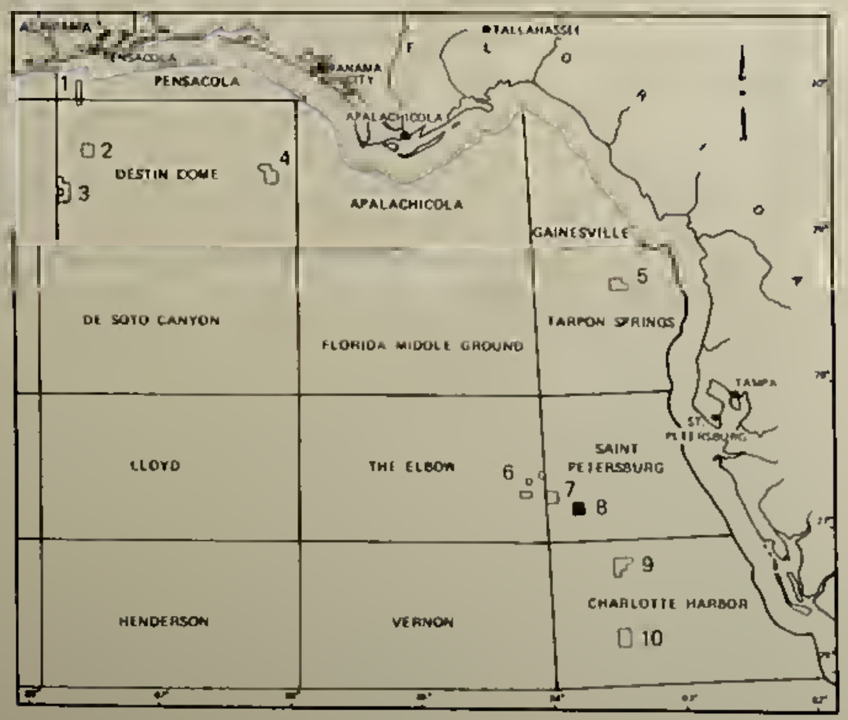
WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 7 OF 10
DATE: OCTOBER 1978
PROJECT NO. 41069

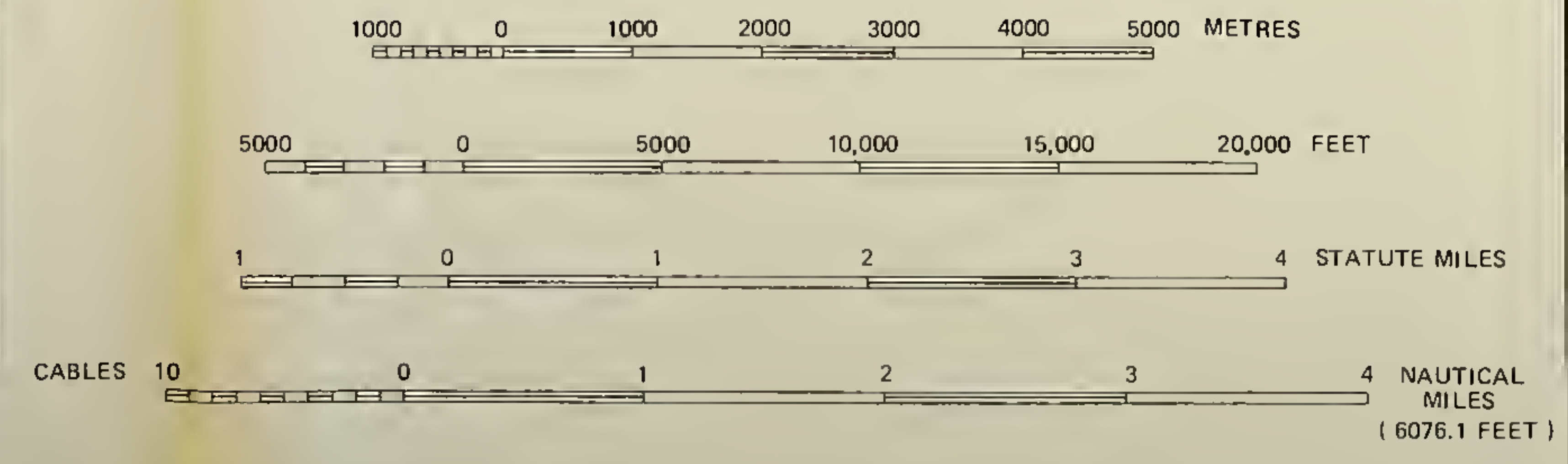


LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17 , (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ⊙ • • • • ⊙ • • • • ⊙ 101 (5, 0) SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.



NATURAL SCALE 1:48,000


1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

NAVIGATION POST PLOTS

AREA:

SAINT PETERSBURG, BLOCKS 753, 754, 797, 798

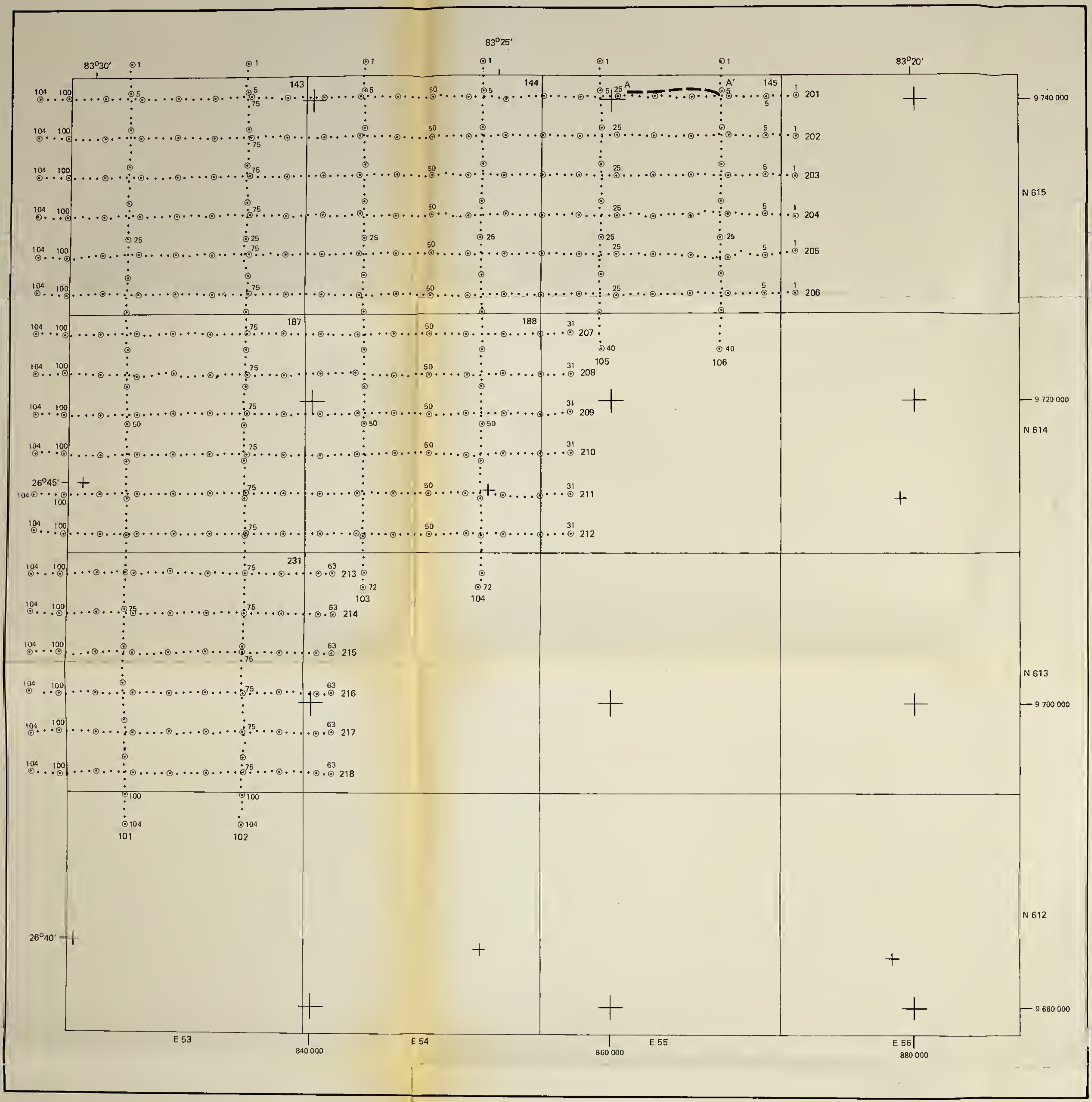
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 8 OF 10

DATE: OCTOBER 1978

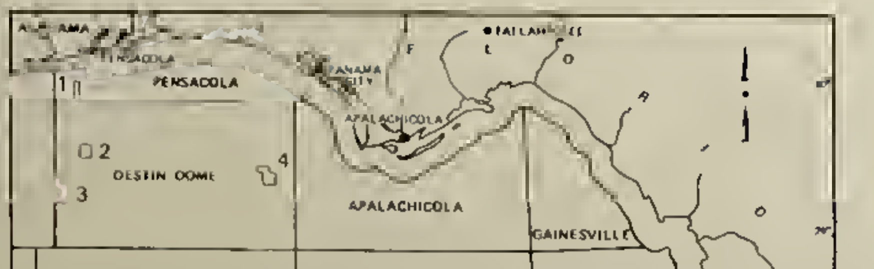
PROJECT NO. 41069



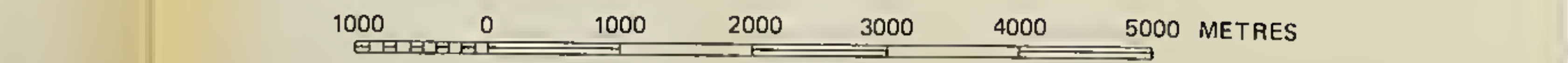
LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17, (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ⊙····5⊙····0⊙ 101 SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.
3. A ▬ ▬ ▬ ▬ A' UNDERWATER TELEVISION AND UNDERWATER CAMERA TRANSECTS.

N



NATURAL SCALE 1:48,000


1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

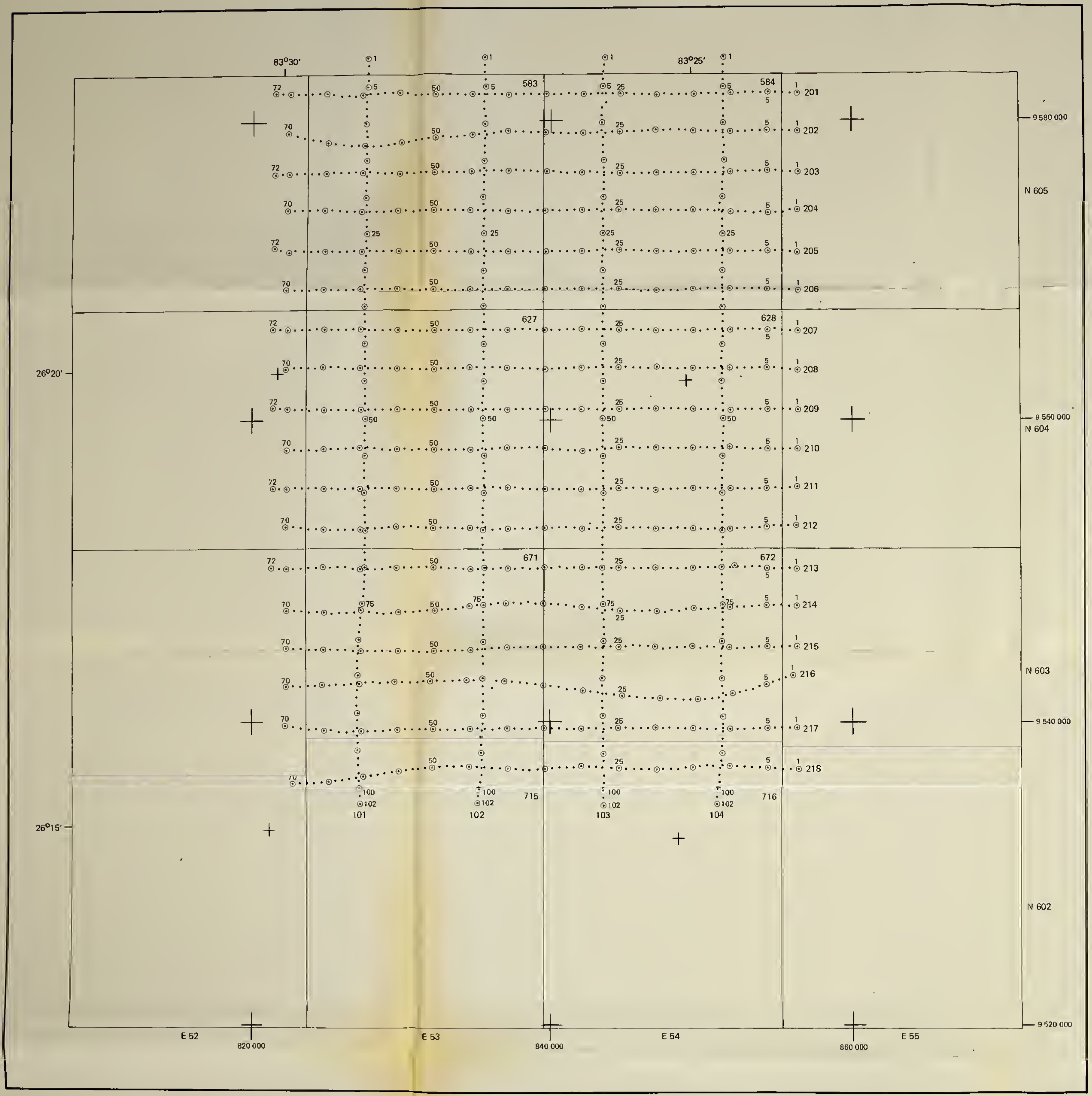
EASTERN GULF OF MEXICO MARINE HABITAT STUDY

NAVIGATION POST PLOTS

AREA:
CHARLOTTE HARBOR, BLOCKS
143, 144, 145, 187, 188, 231

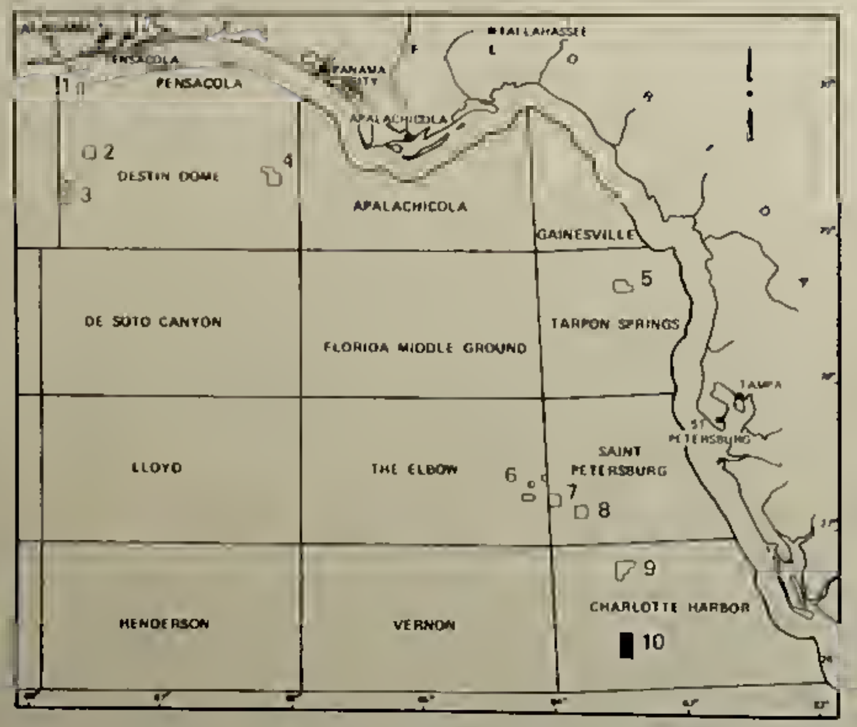
WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 9 OF 10
DATE OCTOBER 1978
PROJECT NO. 41069

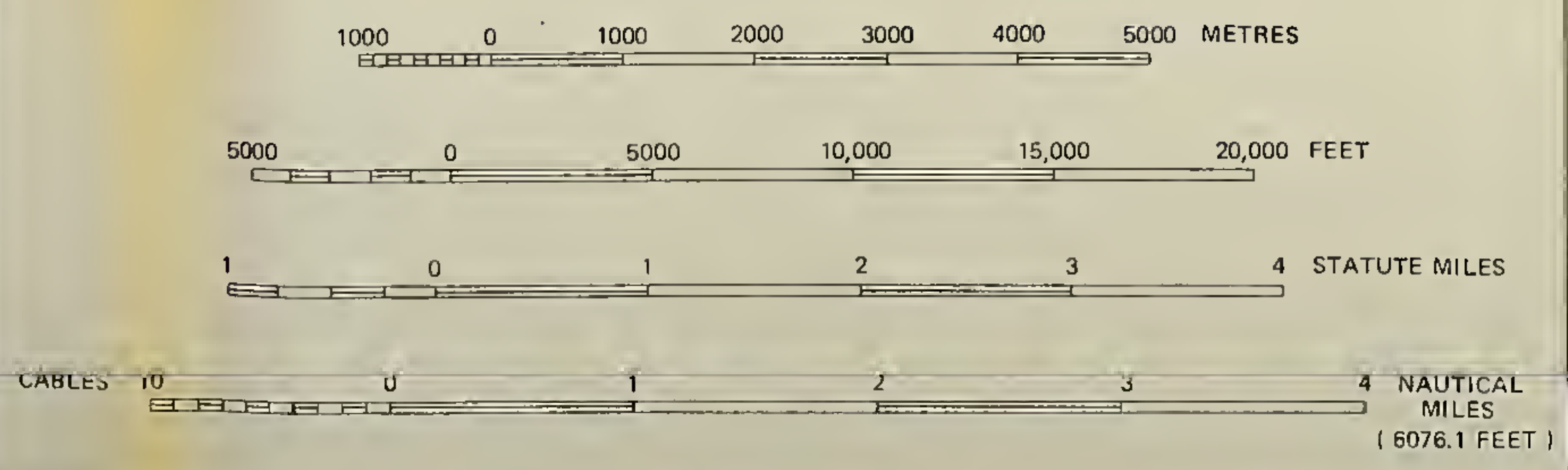


LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17, (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.
2. ◌ • • • • $\overset{5}{⊙}$ • • • • $\overset{0}{⊙}$ 101 SHIPTRACK LINES AND SHOT POINT LOCATIONS. EVERY 5th SHOT POINT IS CIRCLED.



NATURAL SCALE 1:48,000


1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES
(6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

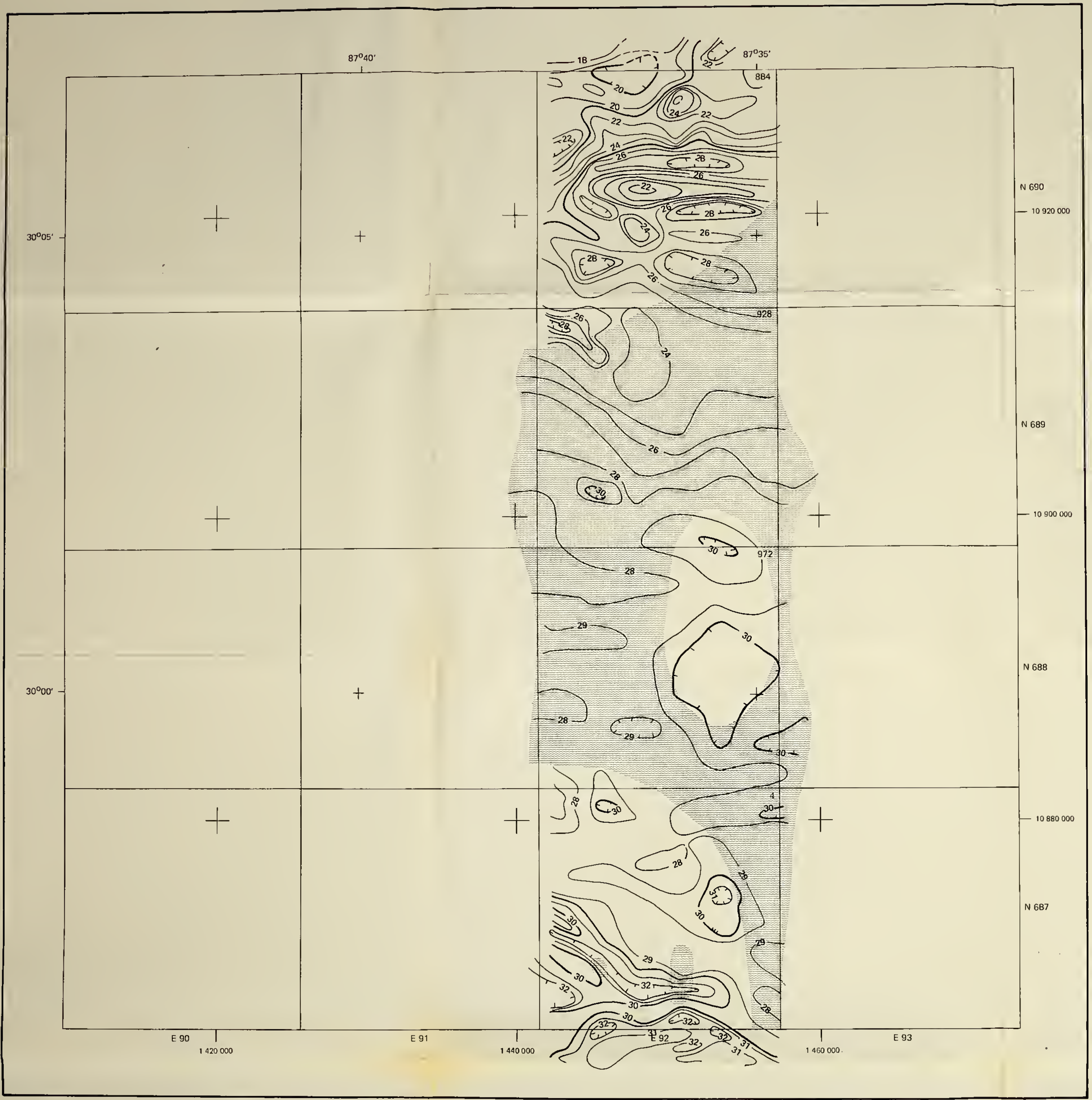
EASTERN GULF OF MEXICO MARINE HABITAT STUDY

NAVIGATION POST PLOTS

AREA:
CHARLOTTE HARBOR, BLOCKS
583, 584, 627, 628, 671, 672
715, 716

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 10 OF 10
DATE: OCTOBER 1978
PROJECT NO. 41069



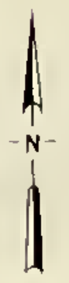
LEGEND

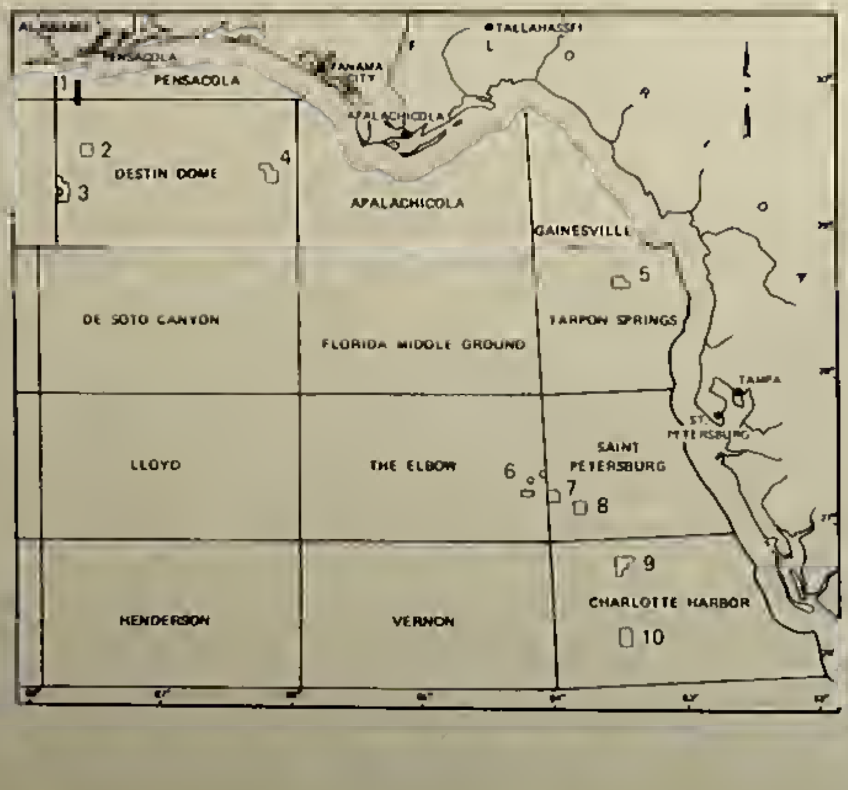
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16, (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

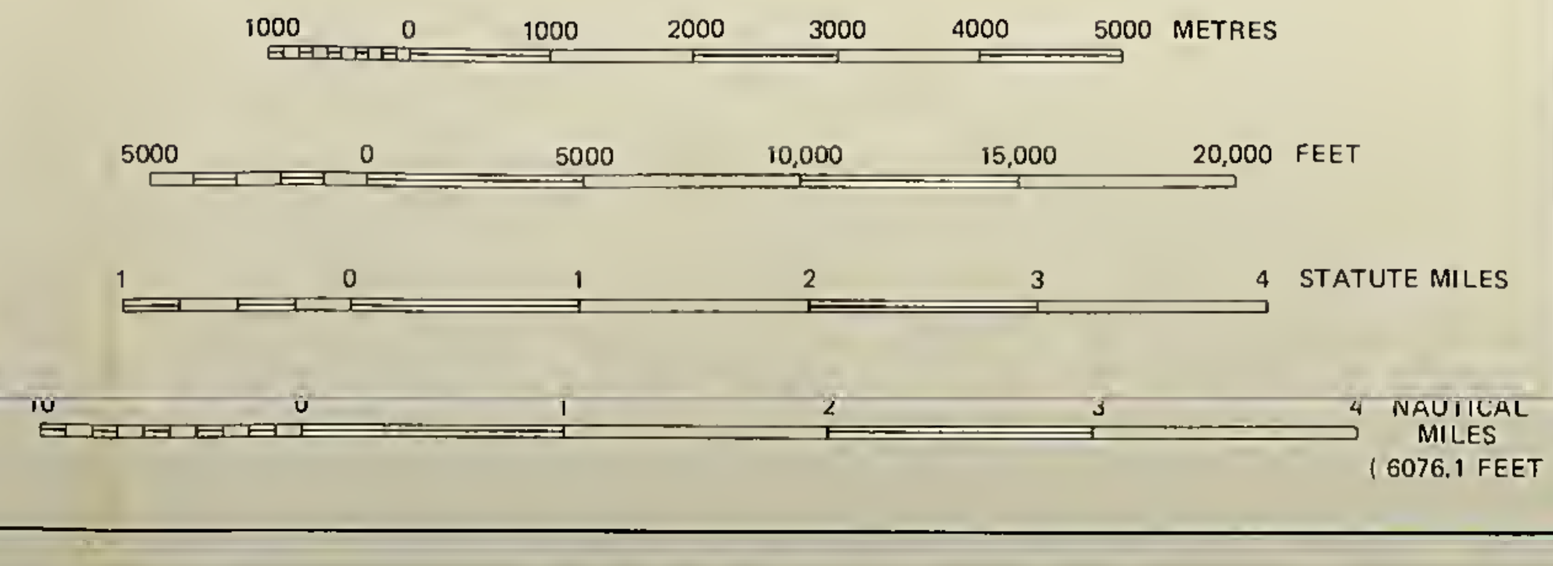
3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
░	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
▒	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁘	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
≋	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.





NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

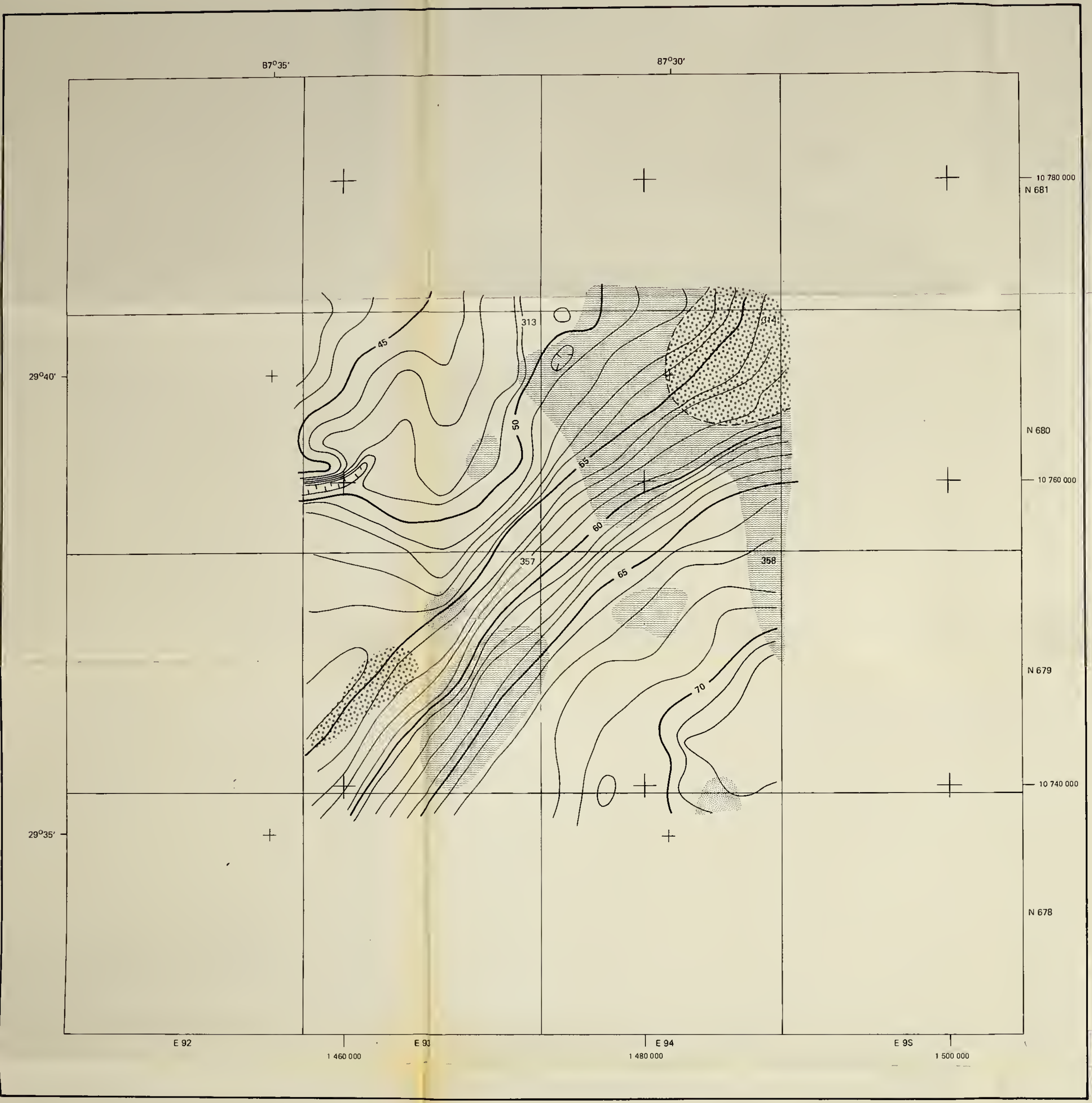
AREA:
PENSACOLA, BLOCKS 884, 928, 972
DESTIN DOME, BLOCK 4

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 1 OF 10

DATE: OCTOBER 1978

PROJECT NO. 41069



LEGEND

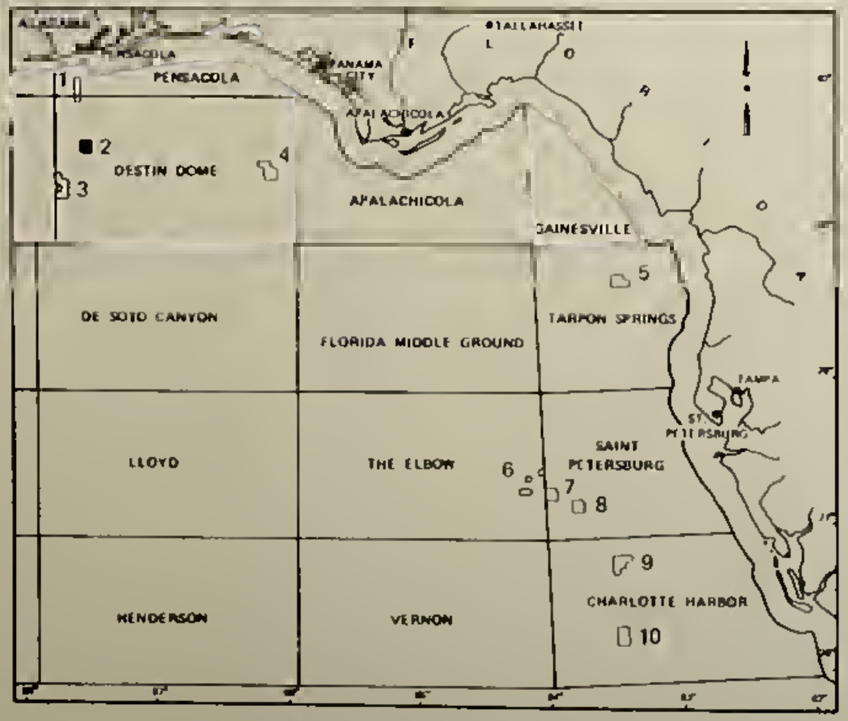
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16, (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. 50 WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

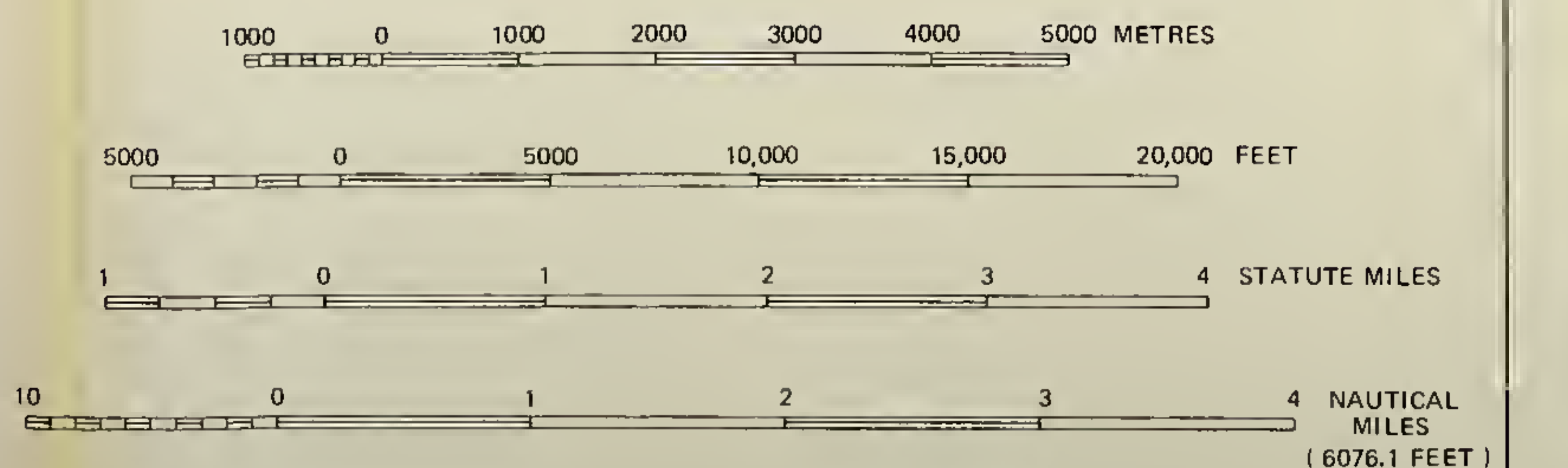
3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
▒	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
░	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁙	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
≡	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.

N



NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

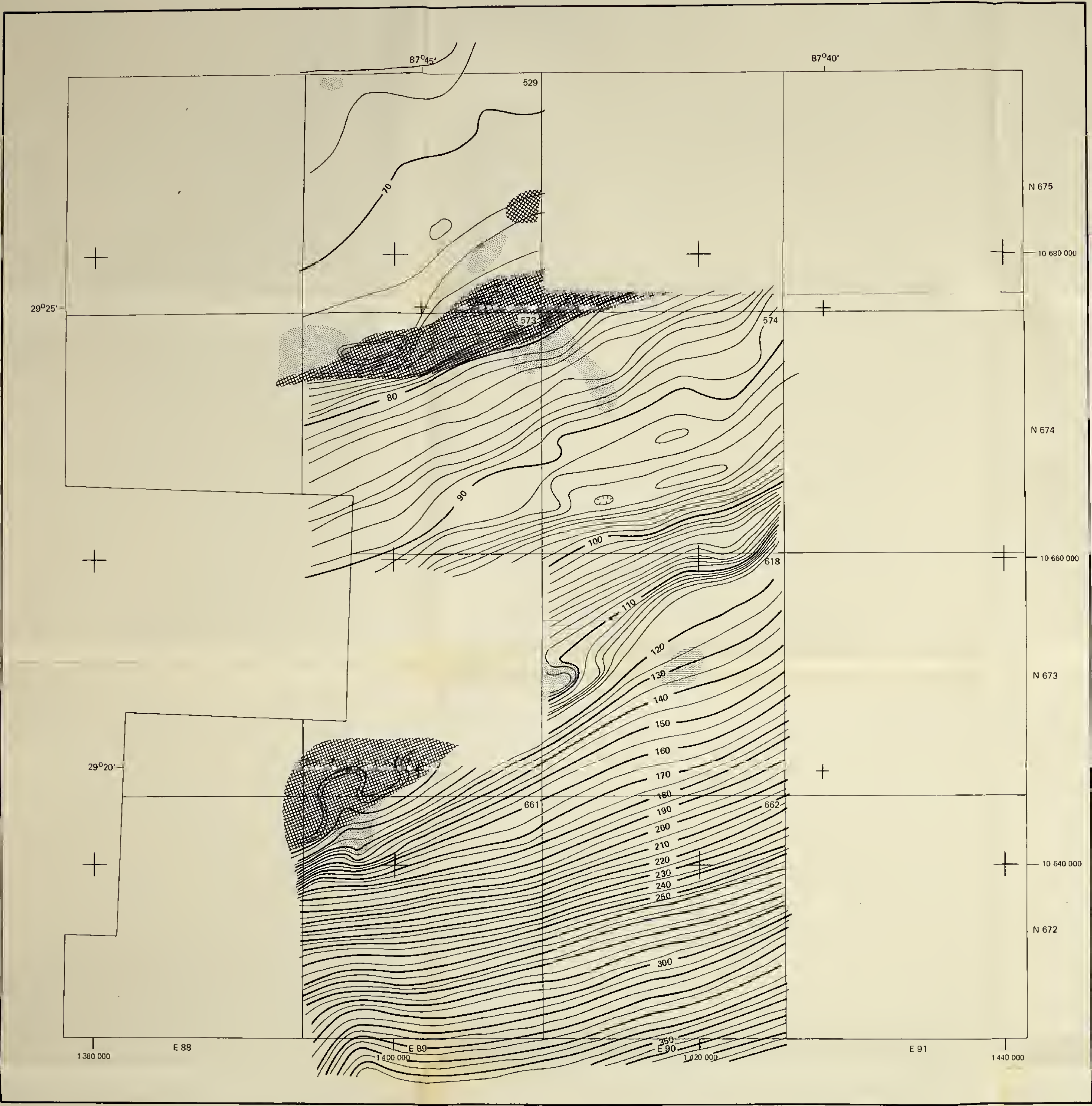
EASTERN GULF OF MEXICO MARINE HABITAT STUDY
BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:
DESTIN DOME, BLOCKS 313, 314, 357, 358

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 2 OF 10

DATE: OCTOBER 1978 | PROJECT NO. 41069



LEGEND

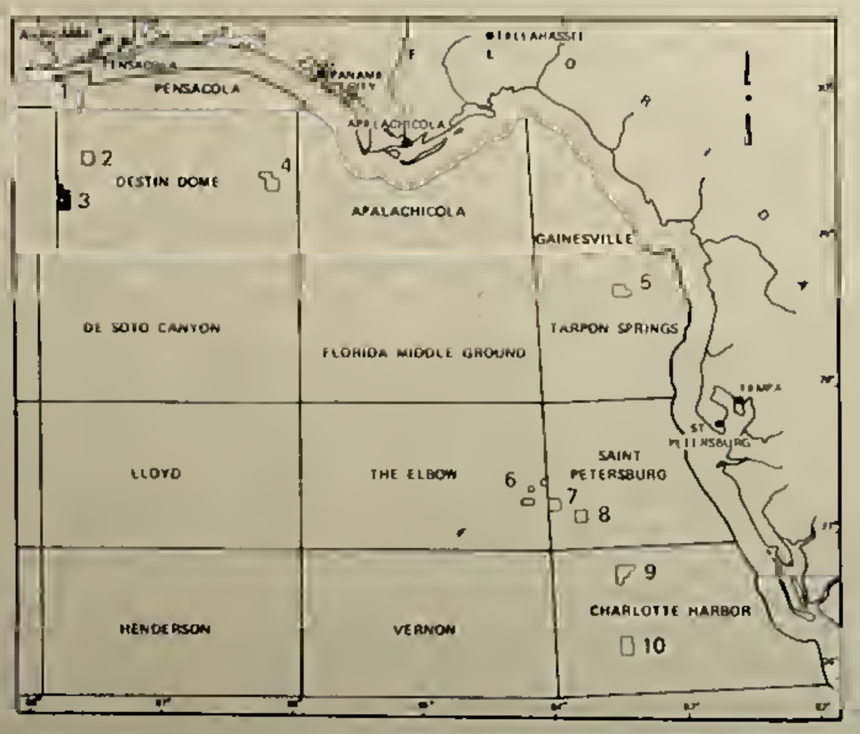
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16 , (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. ⁀50‿ WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

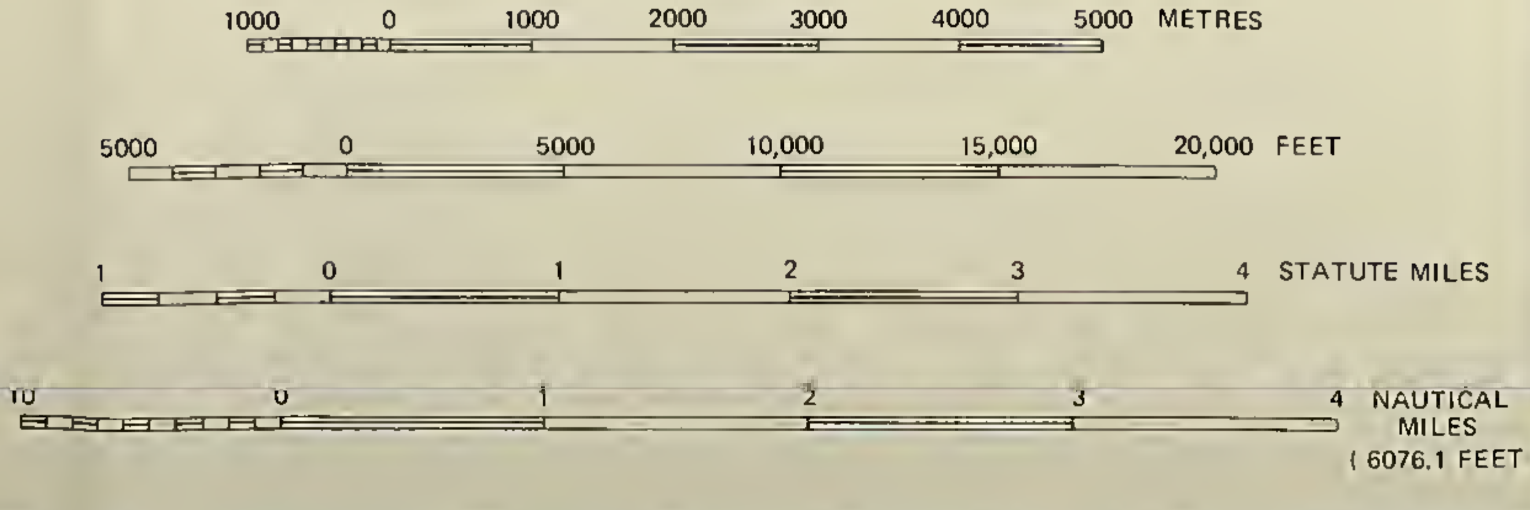
3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
▒	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
░	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁘	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
┅	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.

N



NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY
BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:

DESTIN DOME, BLOCKS, 529, 573, 574, 618, 661, 662

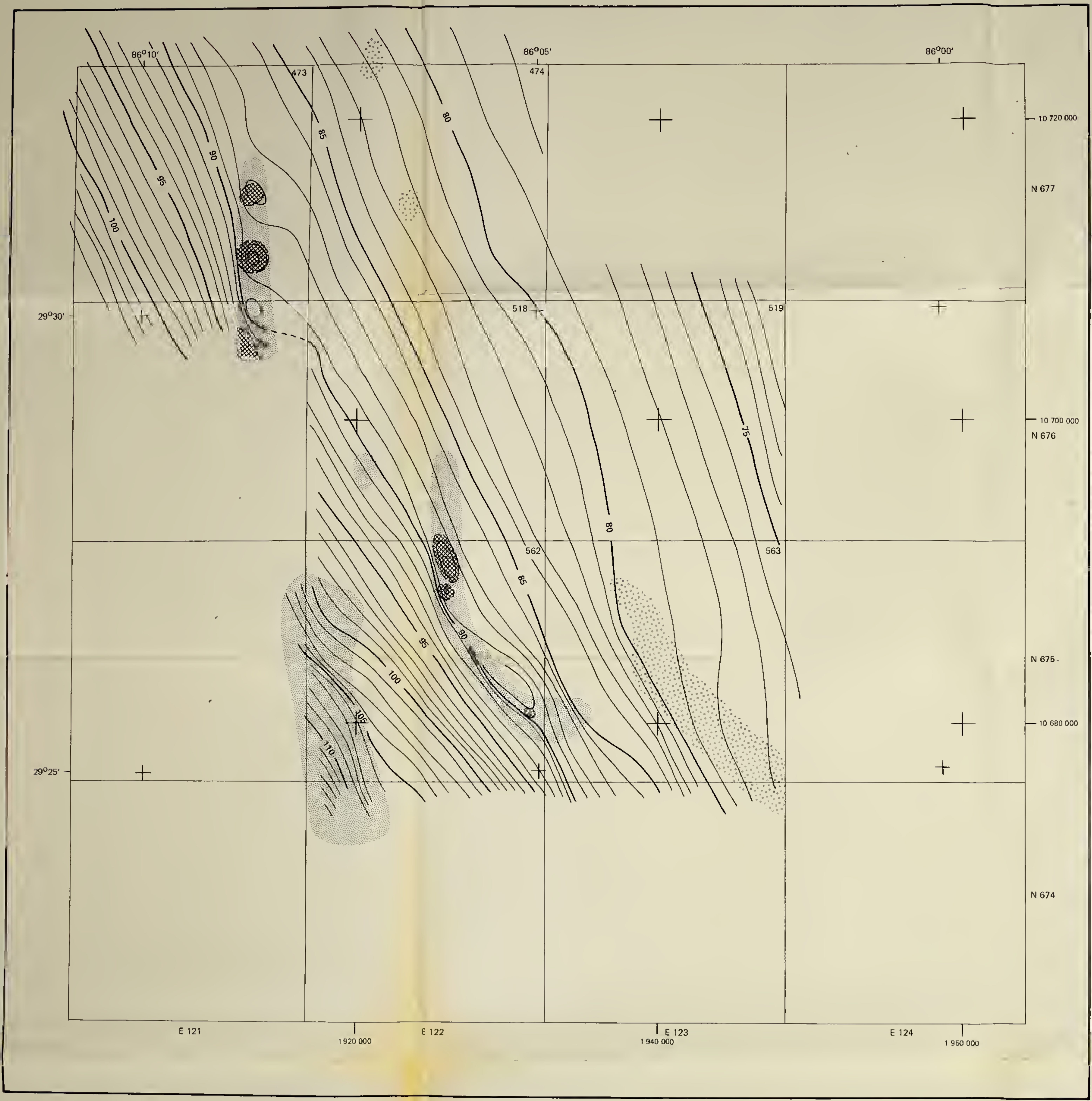
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 3 OF 10

DATE: OCTOBER 1978

PROJECT NO. 41069



LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16 , (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. 50 WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩ PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.

▒ HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.

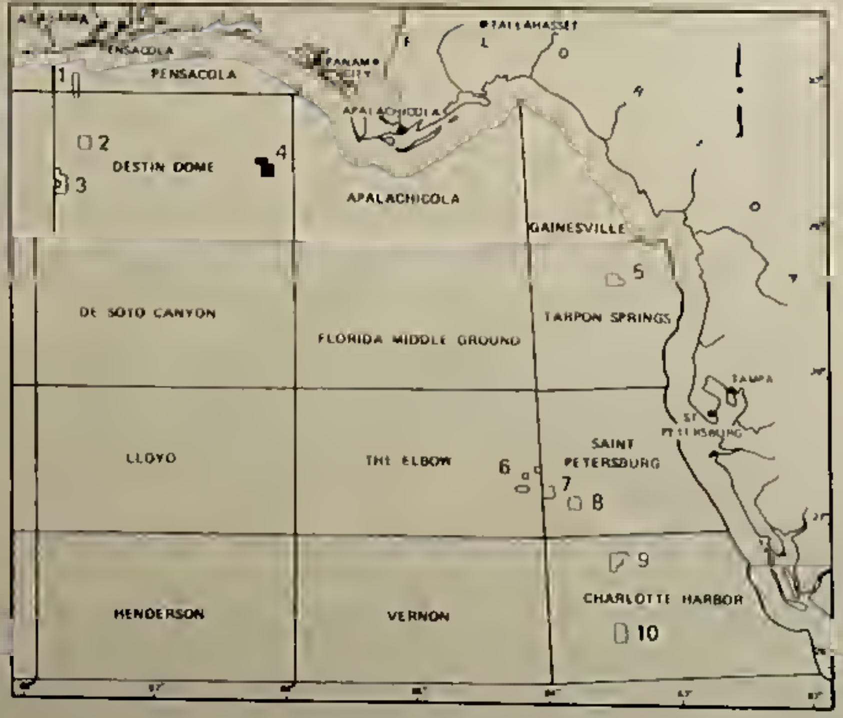
▒ SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.

░ COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.

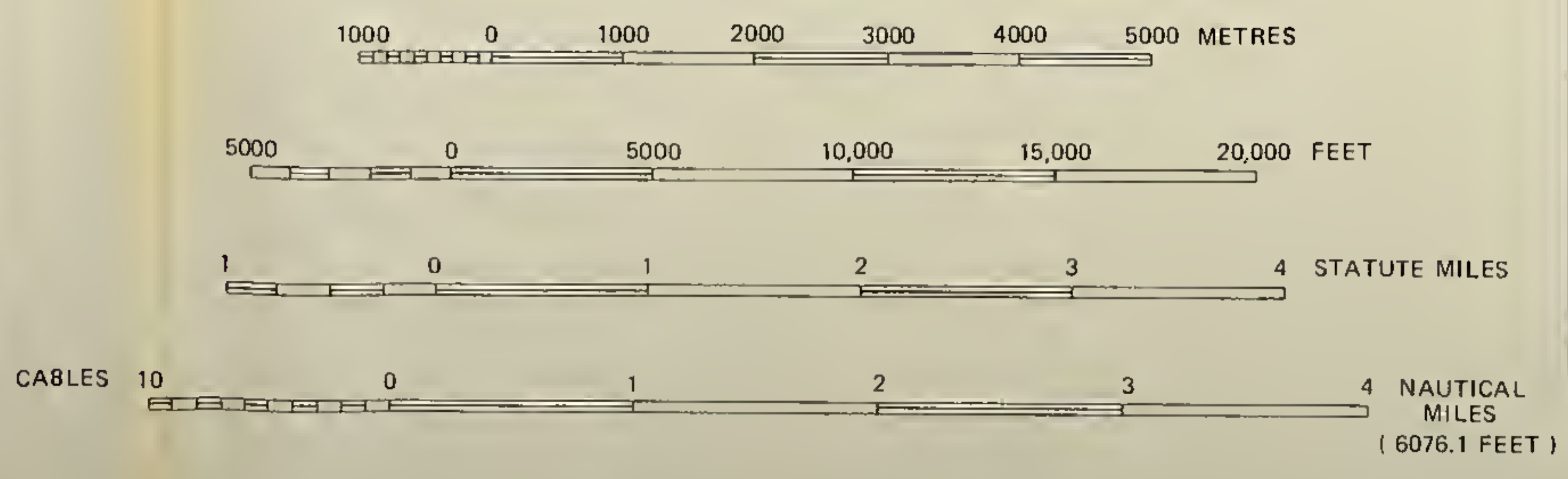
▤ BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.

☐ SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.

N



NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:

DESTIN DOME, BLOCKS 473, 474, 518, 519, 562, 563

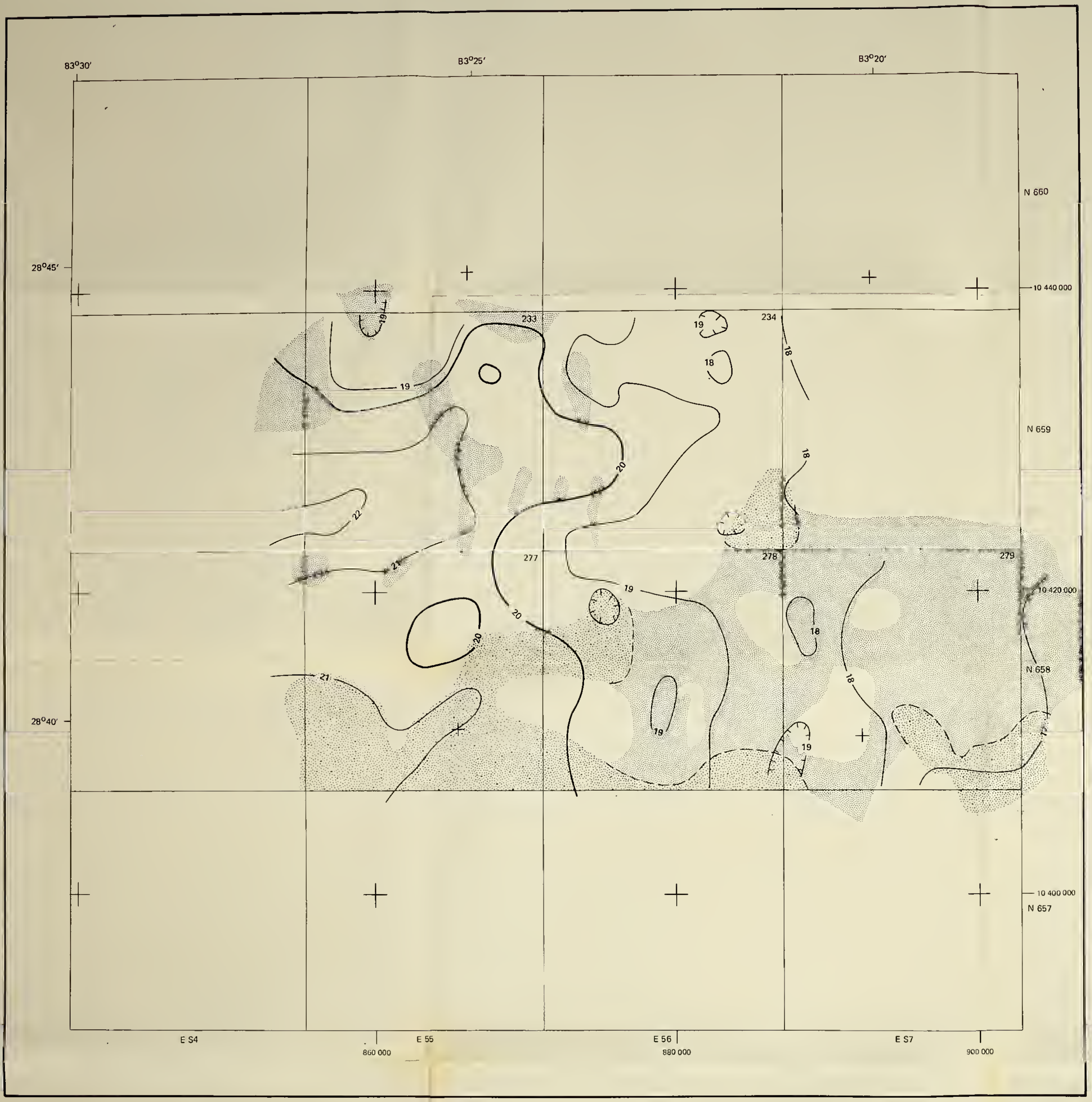
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 4 OF 10

DATE: OCTOBER 1978

PROJECT NO. 41069



LEGEND

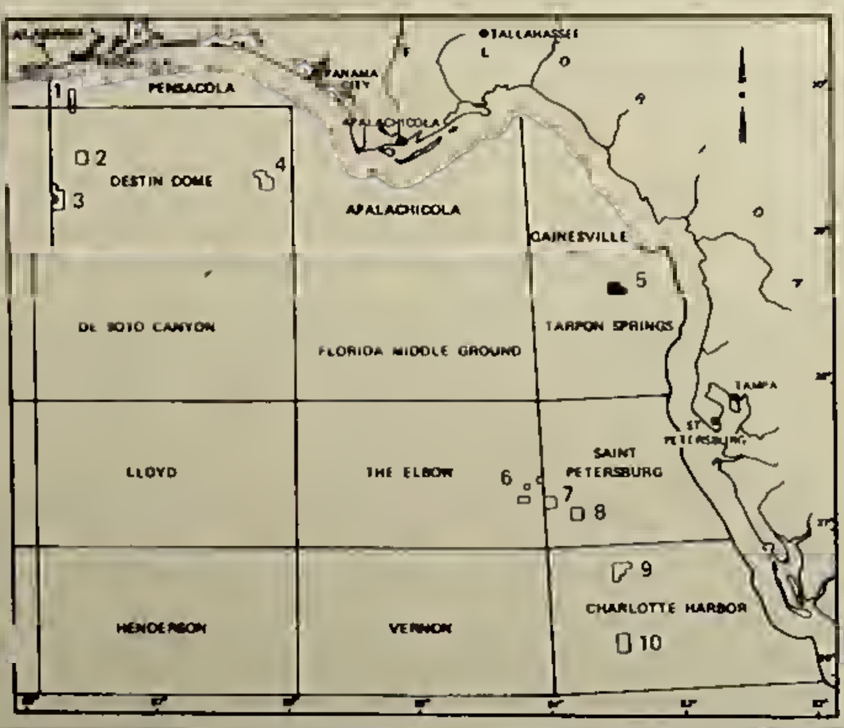
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17 , (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. ⌒ 50 — WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

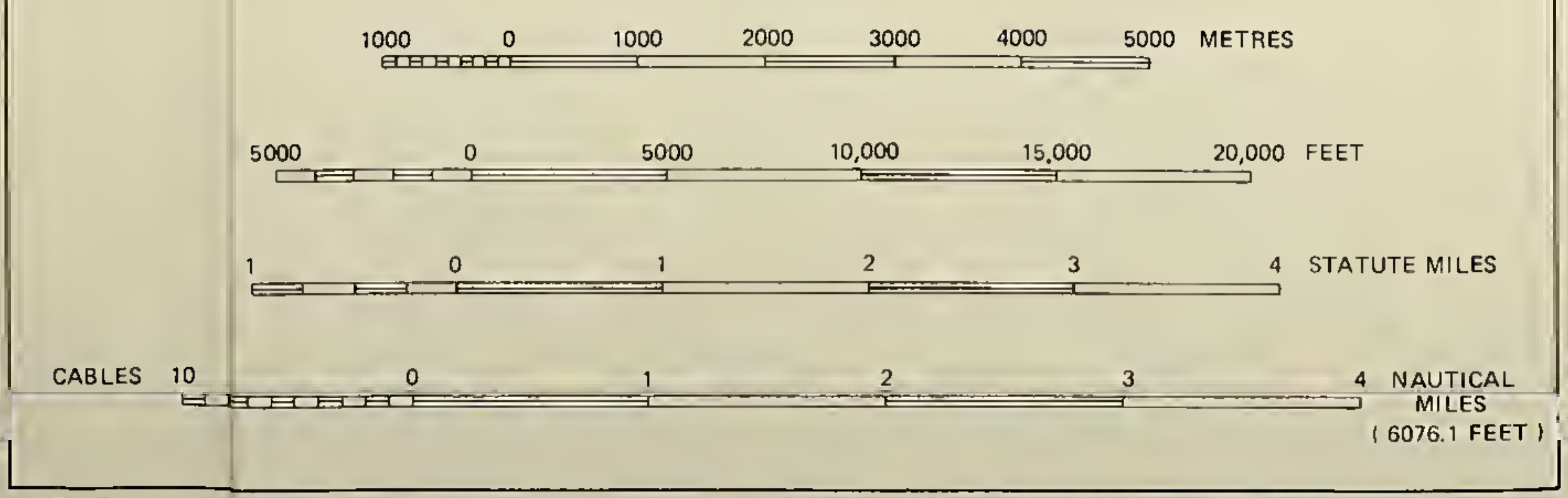
3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
░	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
▒	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁘	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
▤	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.

N



NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY
BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:

TARPON SPRINGS, BLOCKS 233, 234, 277, 278, 279

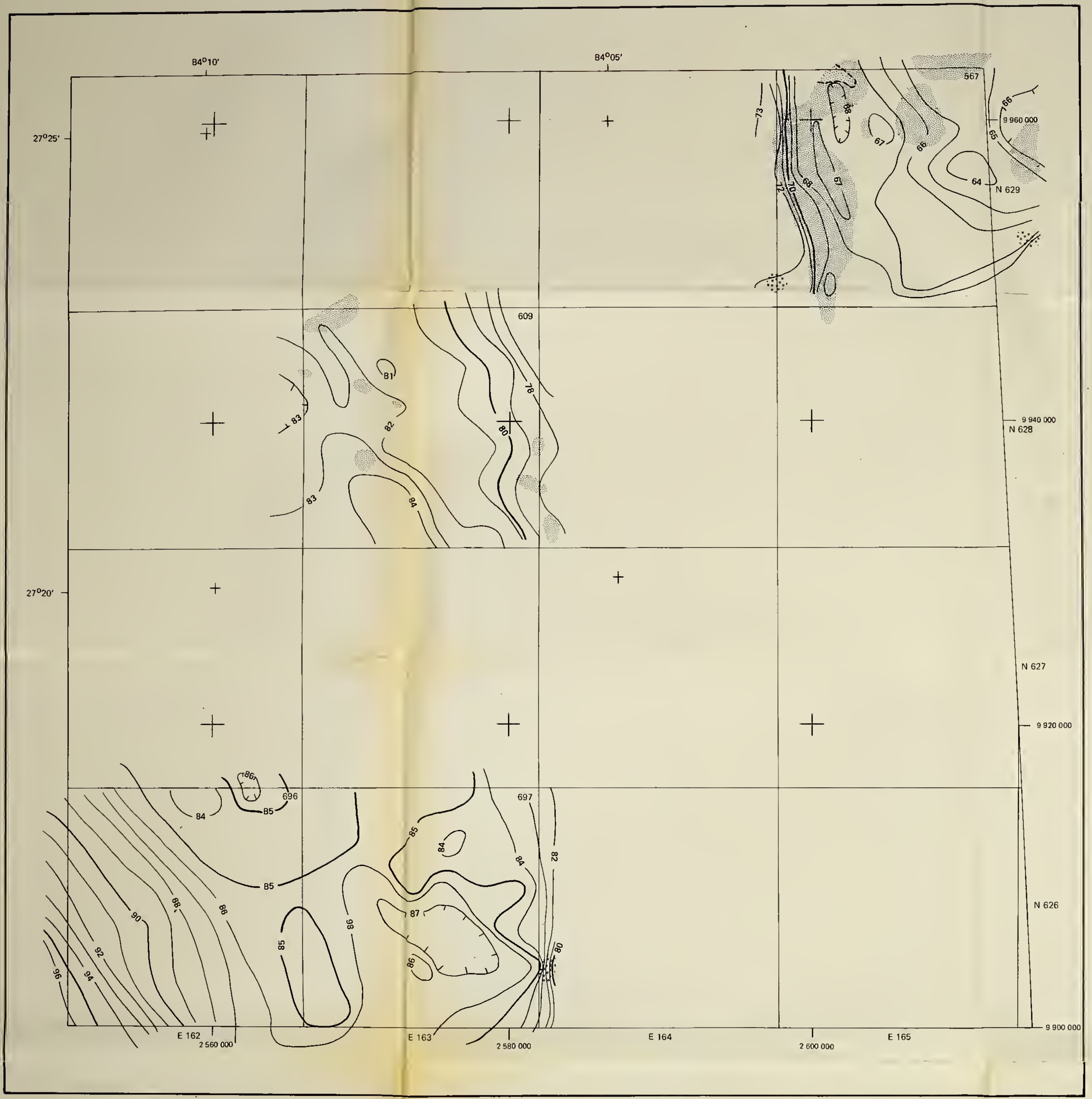
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 5 OF 10

DATE: OCTOBER 1978

PROJECT NO. 41069



LEGEND

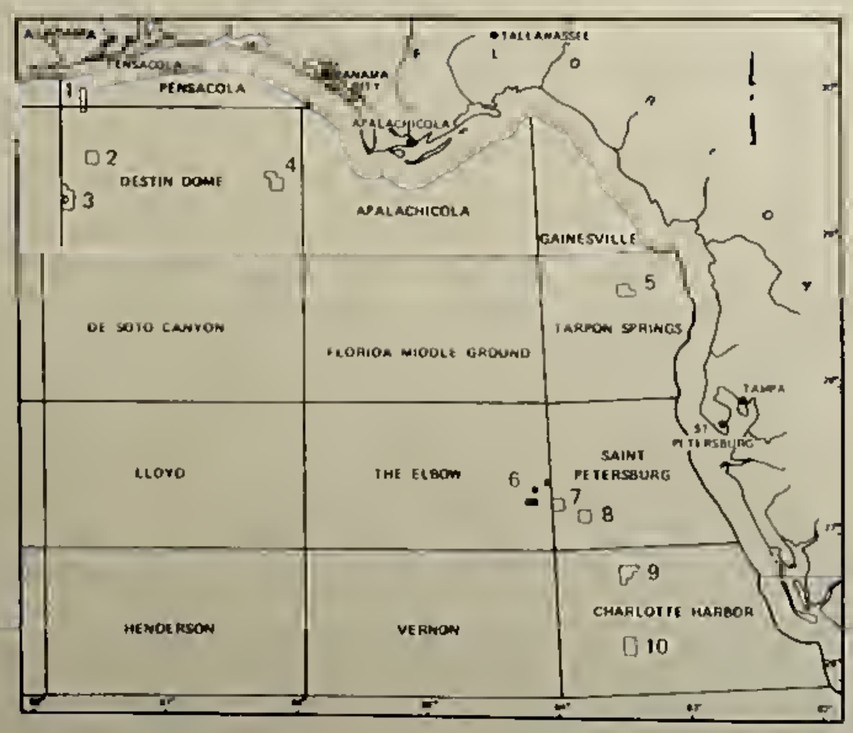
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 16 , (CENTRAL MERIDIAN 87 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

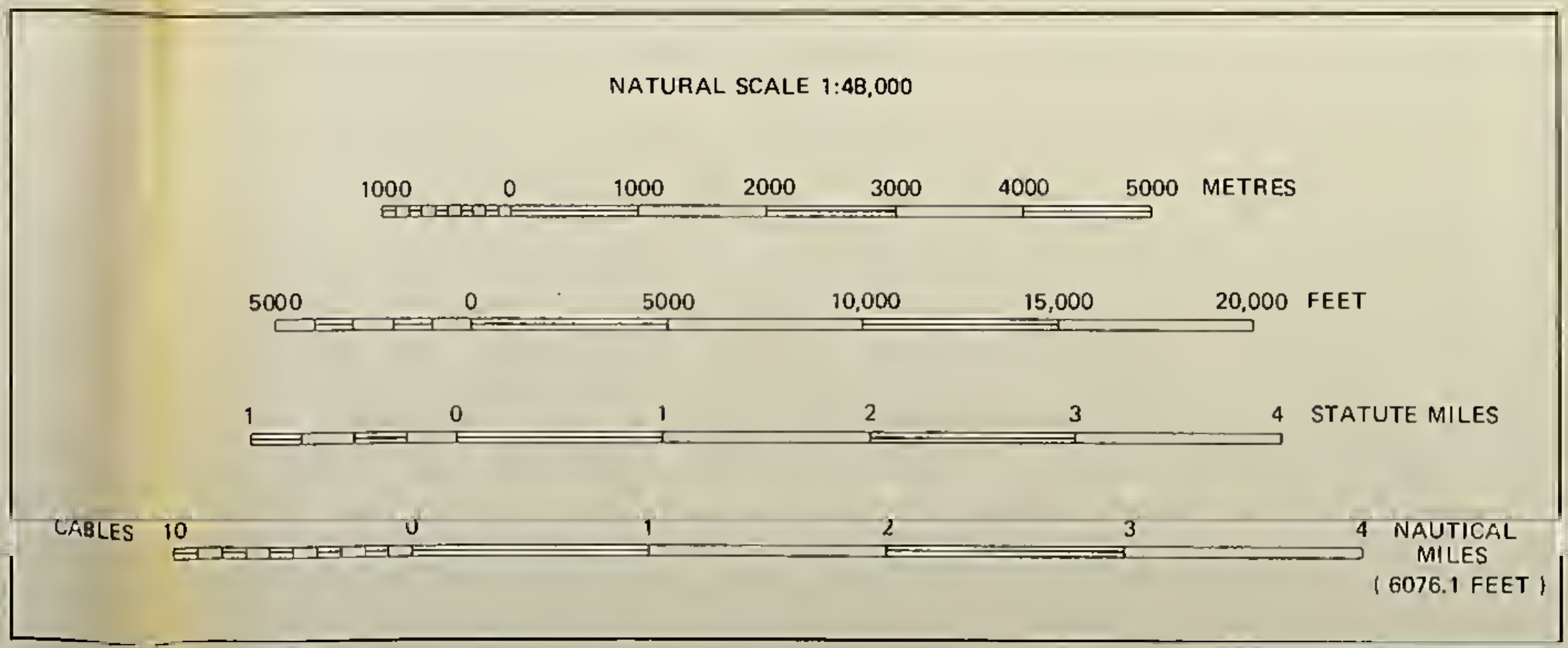
2. WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
▨	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
▨	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁘	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
▤	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.

N




NATURAL SCALE 1:48,000
1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY
BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:

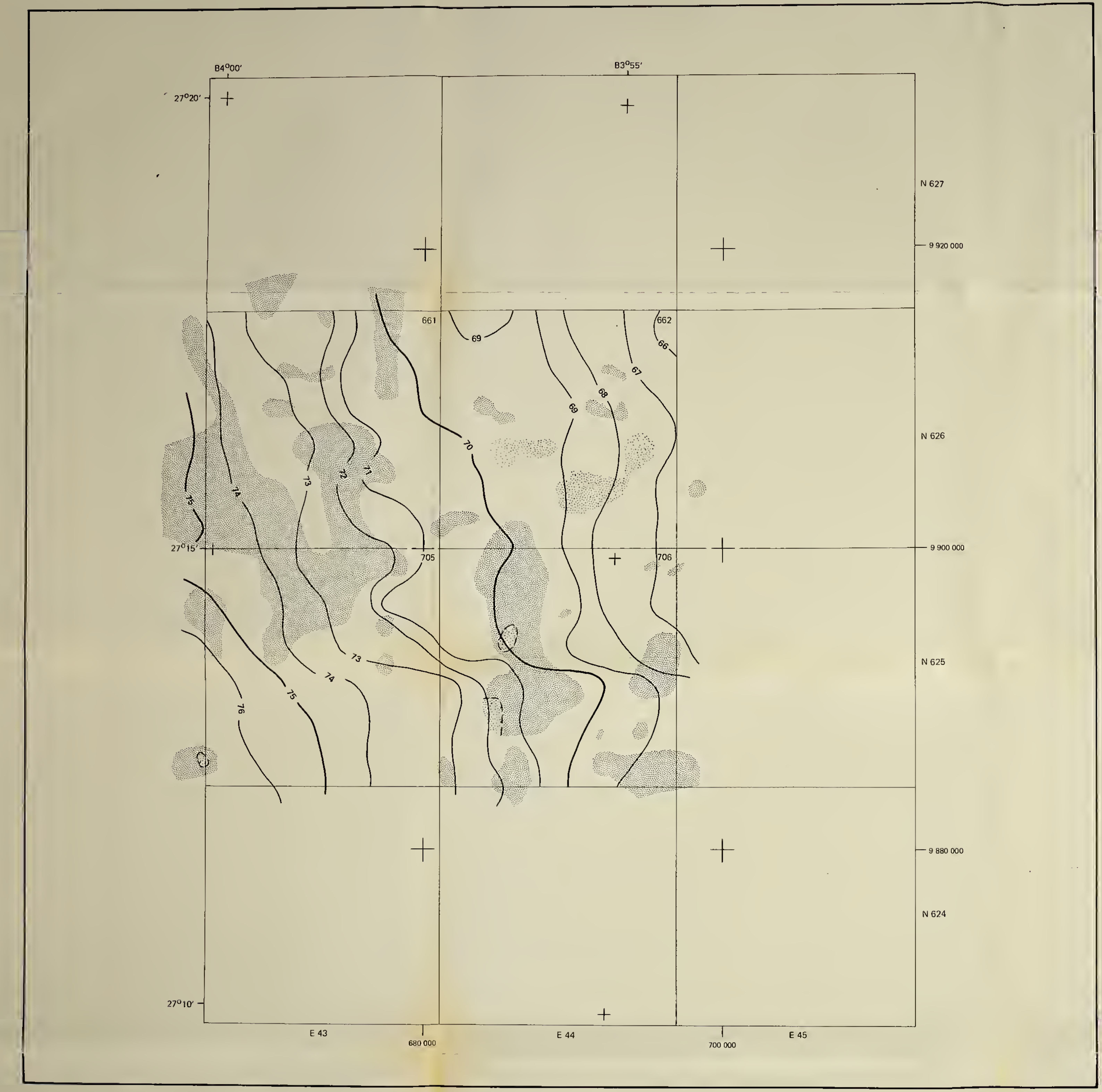
THE ELBOW, BLOCKS 567, 609, 696, 697

SHEET NO. 6 OF 10

WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

DATE: OCTOBER 1978 | PROJECT NO. 41069



LEGEND

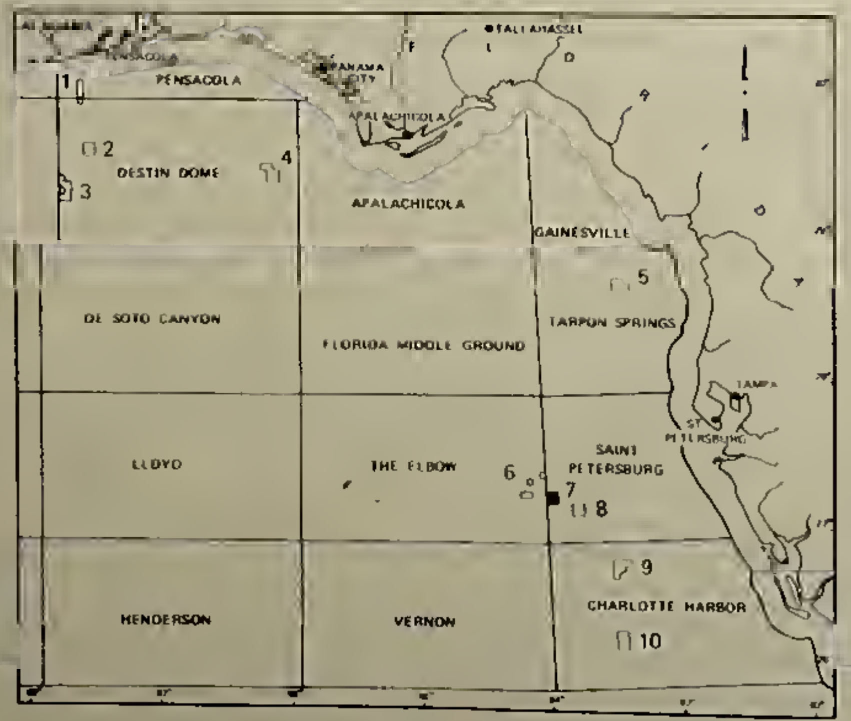
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17, (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

2. ⌒ 50 WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
▒	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
░	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁙	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
≋	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.

N



NATURAL SCALE 1:48,000

1000 0 1000 2000 3000 4000 5000 METRES

5000 0 5000 10,000 15,000 20,000 FEET

1 0 1 2 3 4 STATUTE MILES

CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY
BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:

SAINT PETERSBURG, BLOCKS 661, 662, 705, 706

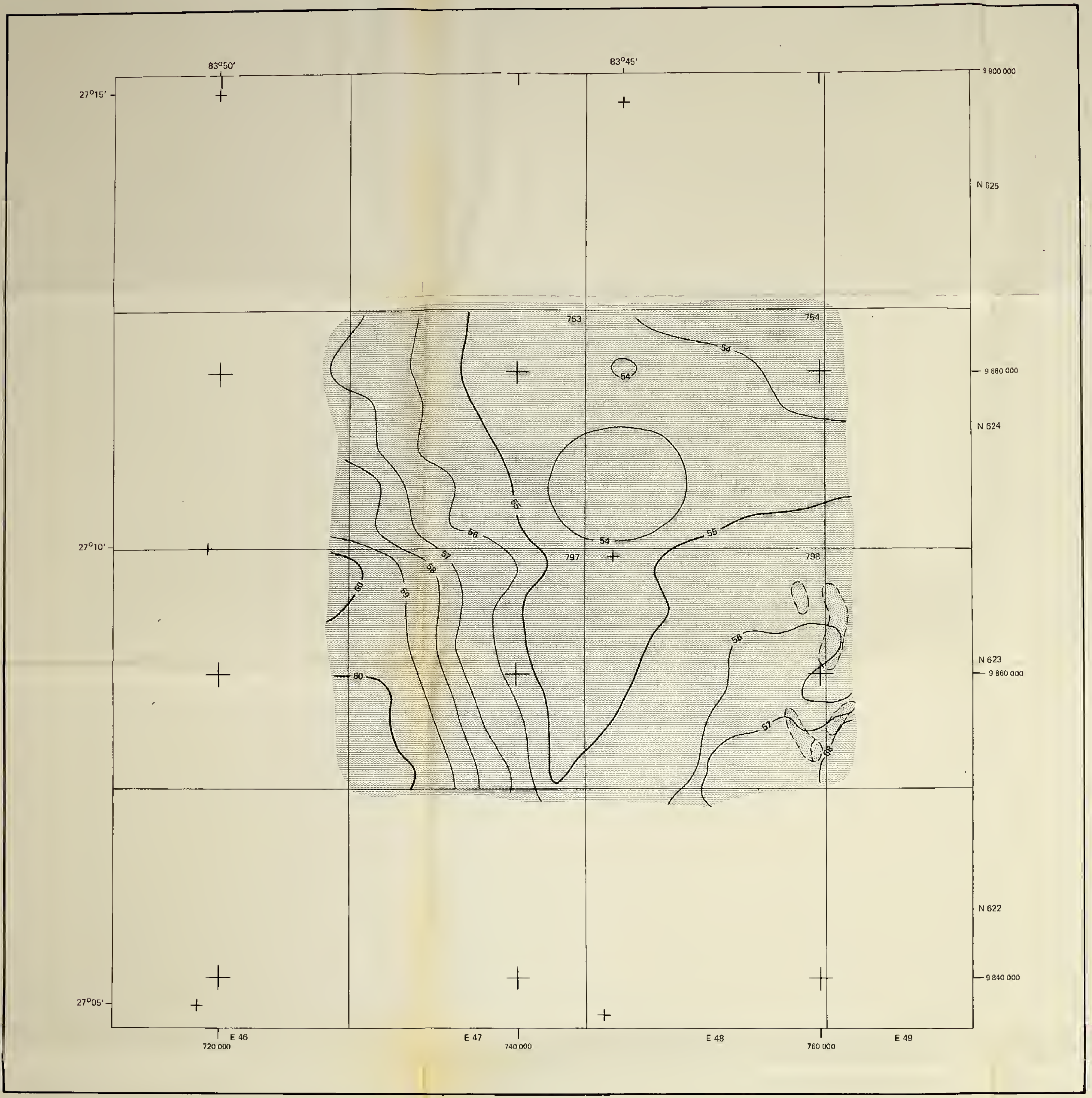
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 7 OF 10

DATE: OCTOBER 1978

PROJECT NO. 41069



LEGEND

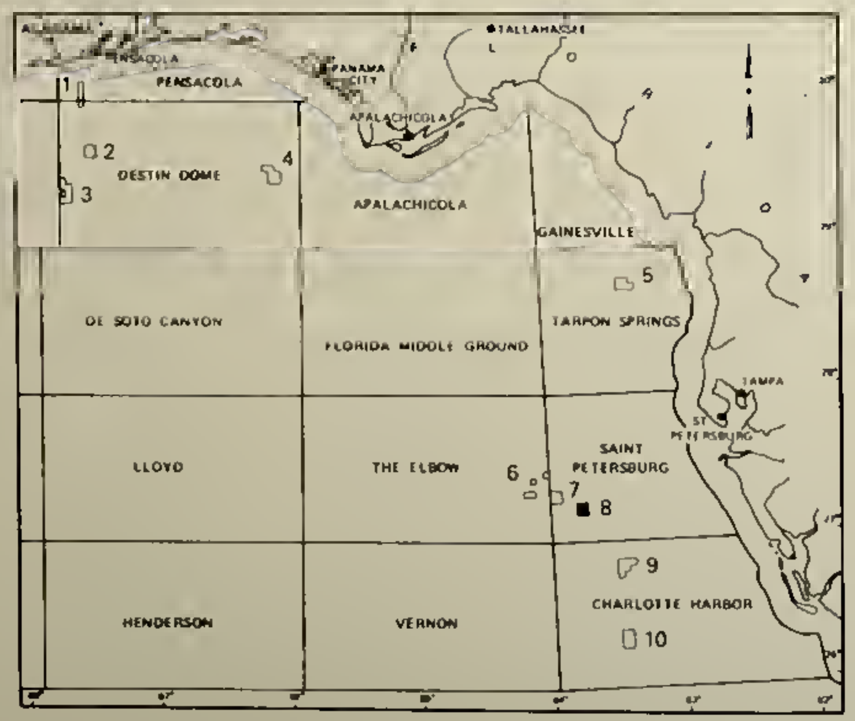
1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17, (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

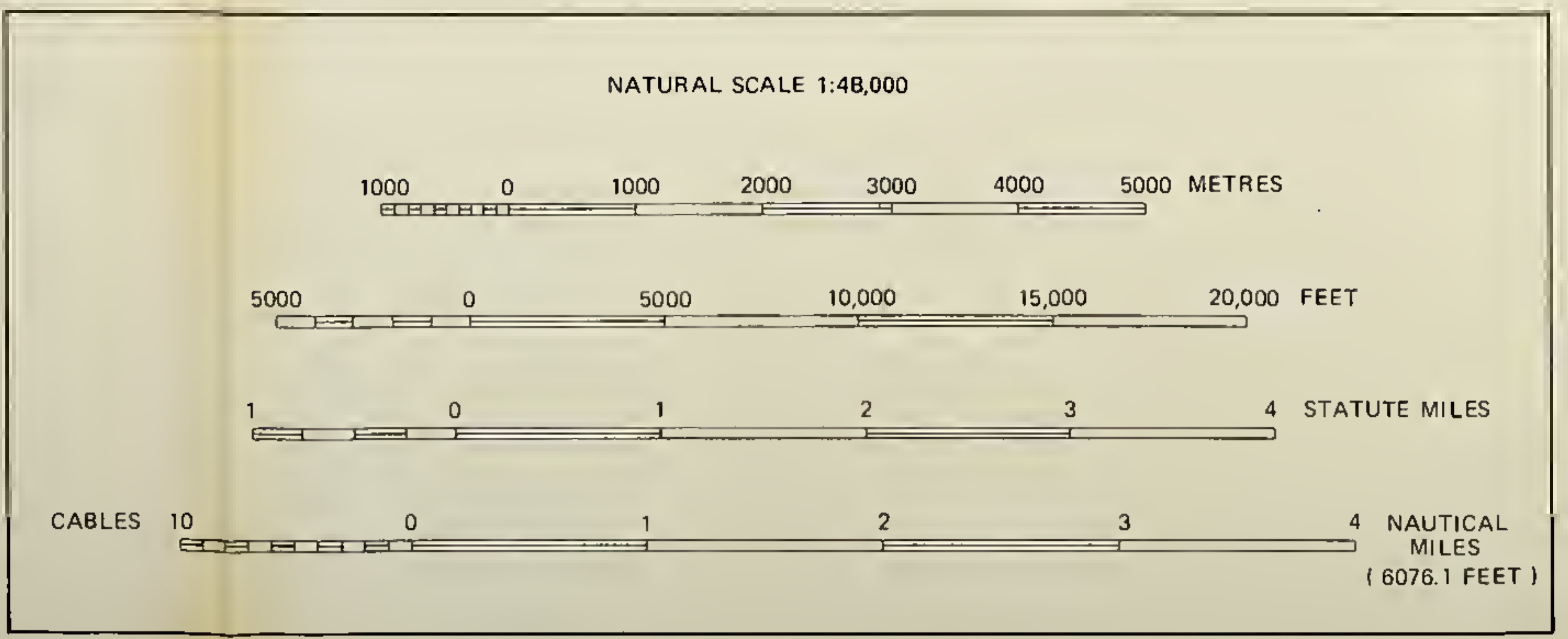
2. ⁀50⁀ WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
░	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
▒	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁘	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
▤	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.

N




NATURAL SCALE 1:48,000
1000 0 1000 2000 3000 4000 5000 METRES
5000 0 5000 10,000 15,000 20,000 FEET
1 0 1 2 3 4 STATUTE MILES
CABLES 10 0 1 2 3 4 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY
BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:

SAINT PETERSBURG, BLOCKS 753, 754, 797, 798

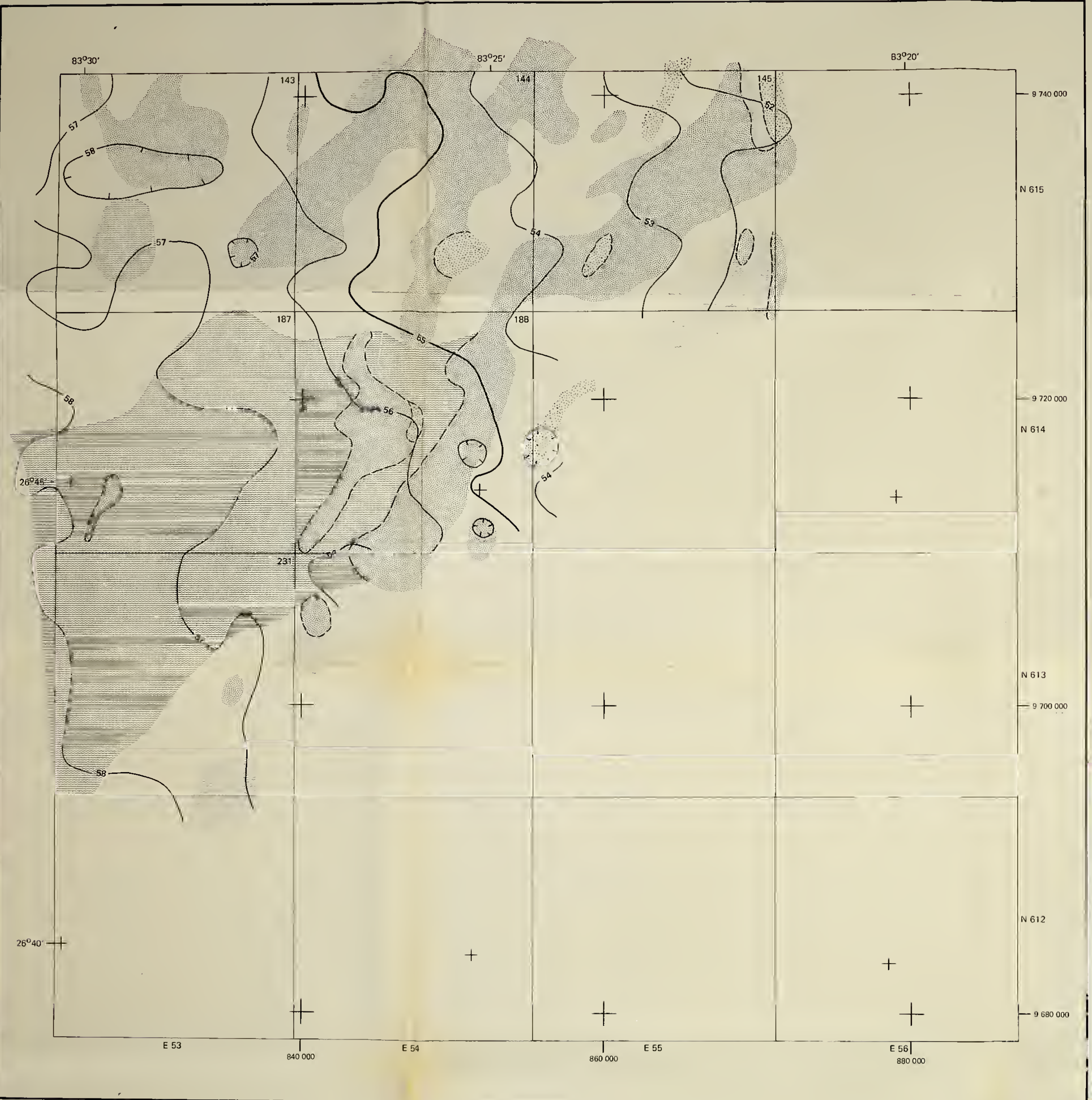
WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 8 OF 10

DATE: OCTOBER 1978

PROJECT NO. 41069



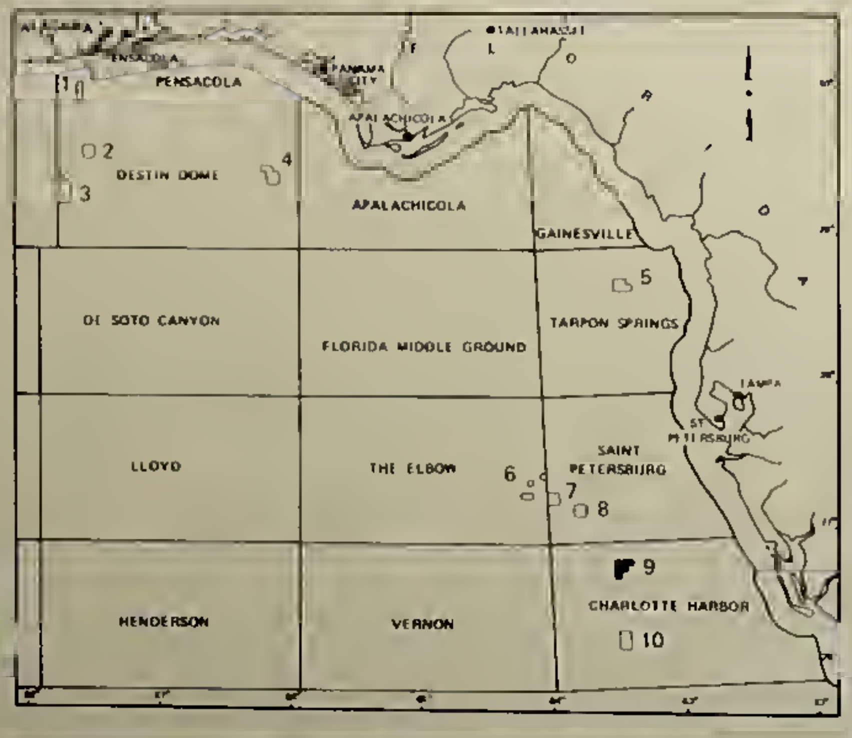
LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17, (CENTRAL MERIDIAN 81°W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

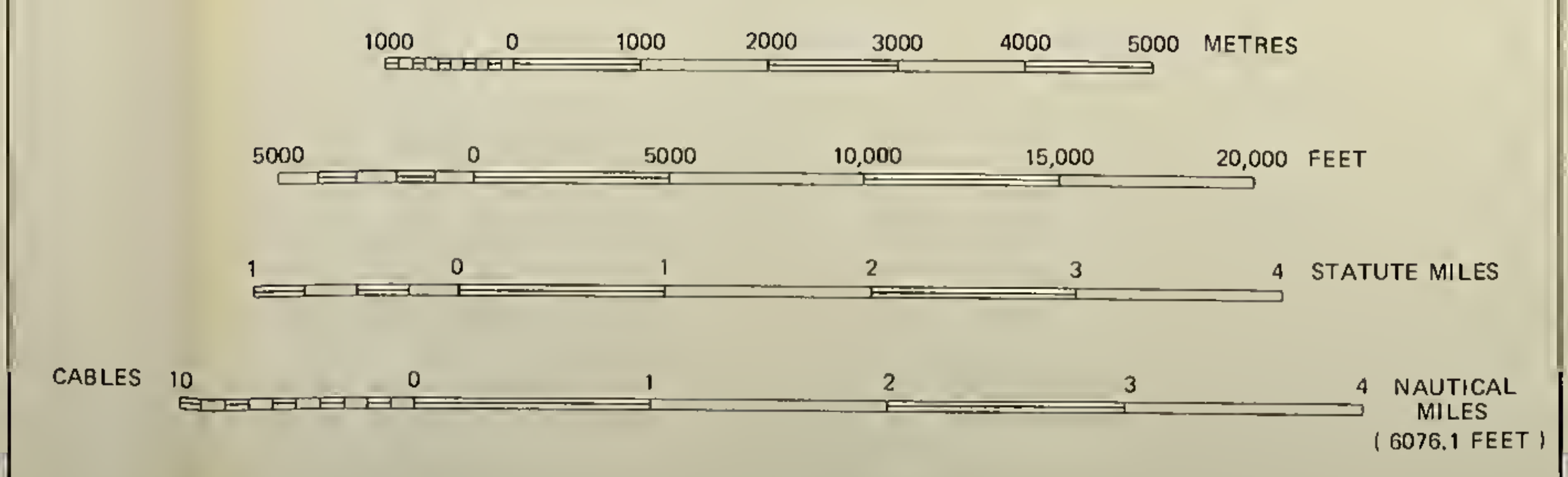
2. 50 WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
░	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
▒	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁘	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
☰	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.



NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

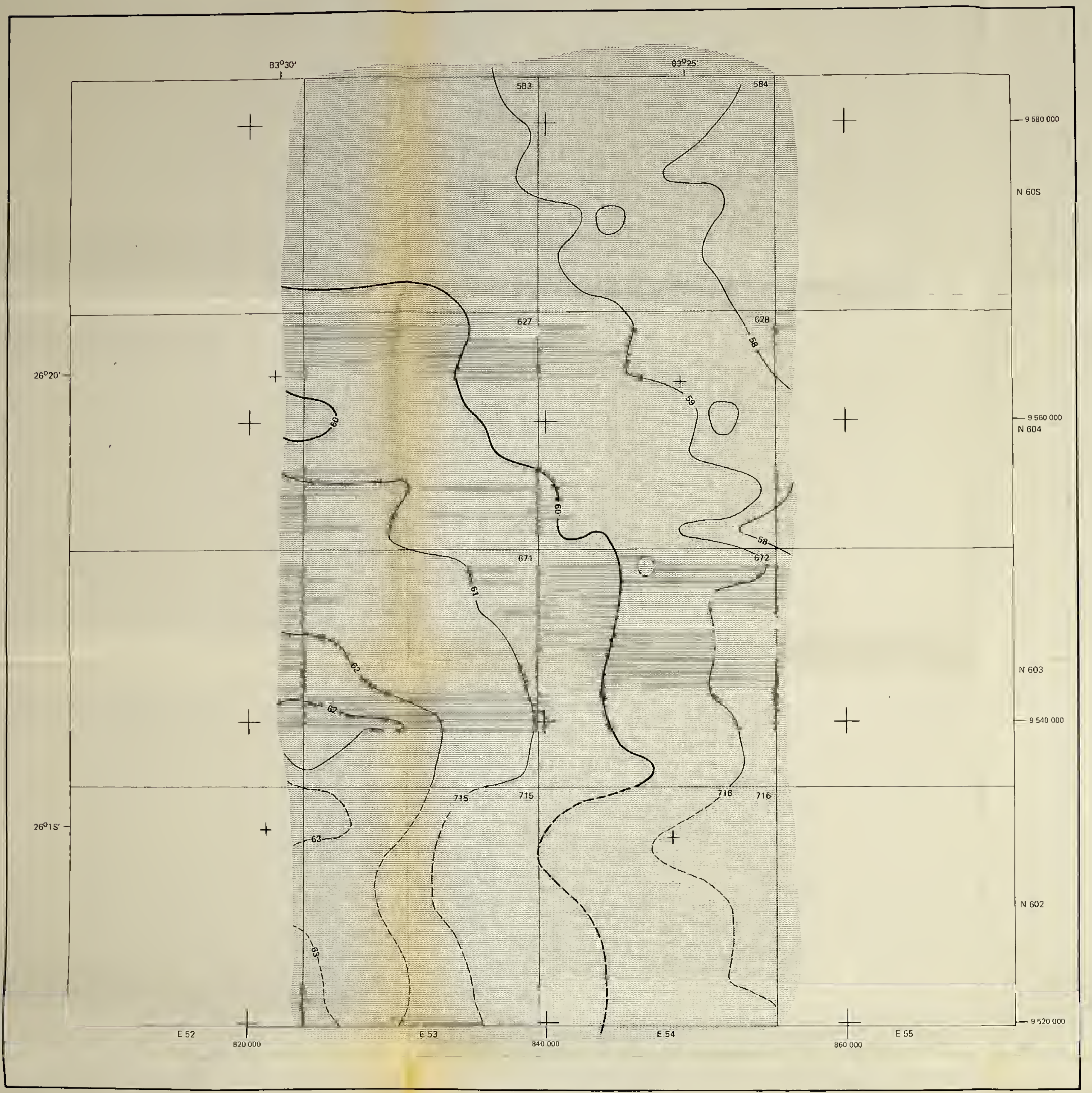
BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

AREA:
CHARLOTTE HARBOR, BLOCKS
143, 144, 145, 187, 188, 231

SHEET NO. 9 OF 10

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

DATE: OCTOBER 1978 | PROJECT NO. 41069



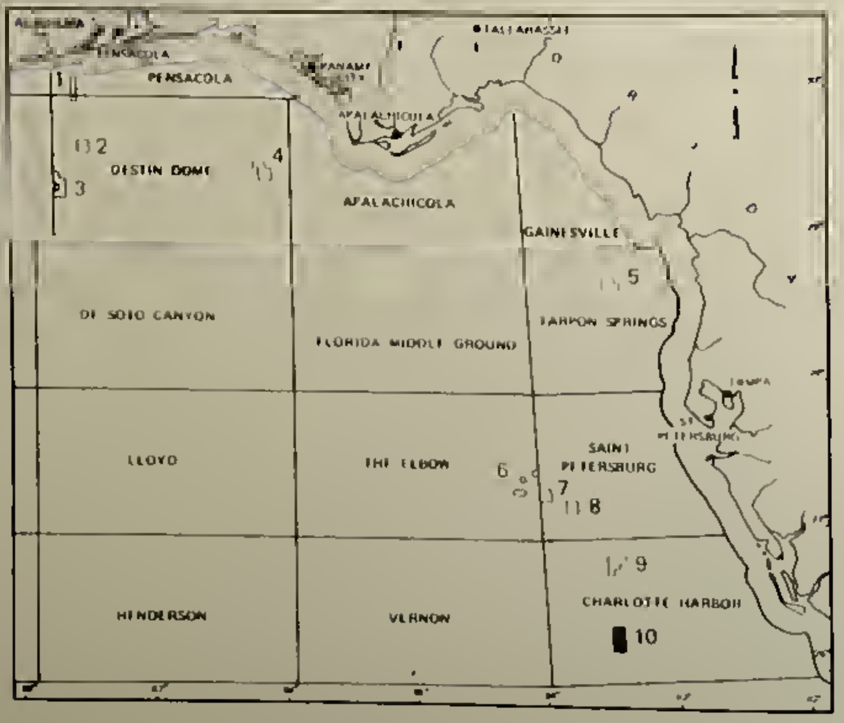
LEGEND

1. BASE MAP GRID IS THE UNIVERSAL TRANSVERSE MERCATOR GRID, ZONE 17, (CENTRAL MERIDIAN 81 °W), WITH COORDINATES IN FEET USING THE CLARKE 1866 SPHEROID.

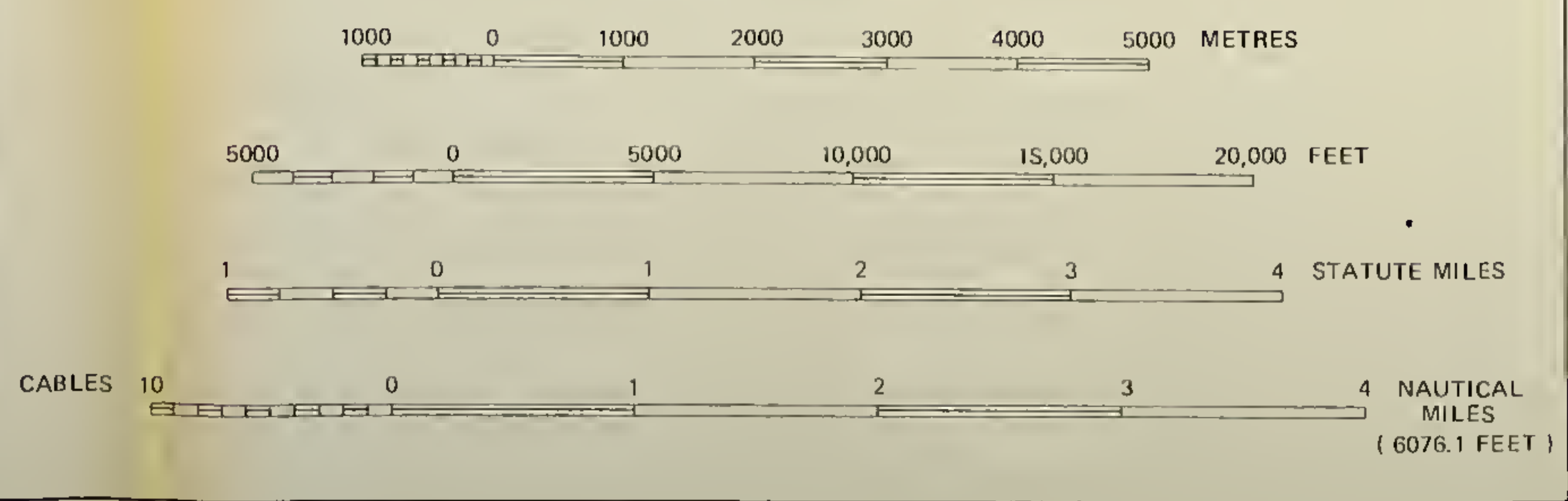
2. 50 WATER DEPTH IN METRES REFERENCED TO MEAN LOW WATER. CONTOUR INTERVAL ONE METRE AND FIVE METRES.

3. SEA FLOOR SEDIMENT CHARACTERISTICS

▩	PINNACLES: CORAL REEFS OR BEDROCK OUTCROPS WHICH EXTEND TWO OR MORE METRES ABOVE THE SEA FLOOR.
░	HARD BOTTOM: EXTENSIVE AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF. MAY CONTAIN LOCAL AREAS OF THIN SEDIMENT COVER.
▒	SCATTERED HARD BOTTOM: LIMITED AREAS OF EXPOSED LIMESTONE OR REEFS OF LOW RELIEF WITHIN EXTENSIVE AREAS OF THIN SEDIMENT COVER.
⁘	COARSE BOTTOM: AREAS WHERE SIDESCAN SONAR SHOWS A COARSE TEXTURED SEA FLOOR. COARSE TEXTURE MAY RESULT FROM EITHER BEDROCK OR REEF RUBBLE OR BIOLOGICAL ACTIVITY.
≈	BEDFORMS: AREAS OF SANDY BOTTOM SHOWING CURRENT RIPPLE MARKS, LOW RELIEF SWELLS OR DUNE TYPE FEATURES.
☐	SOFT BOTTOM: AREAS OF SAND, SILT, OR MUD BOTTOM DEVOID OF ANY SIGNIFICANT SIDESCAN SONAR TARGETS.



NATURAL SCALE 1:48,000



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

BATHYMETRY AND SEA FLOOR SEDIMENT CHARACTERISTICS

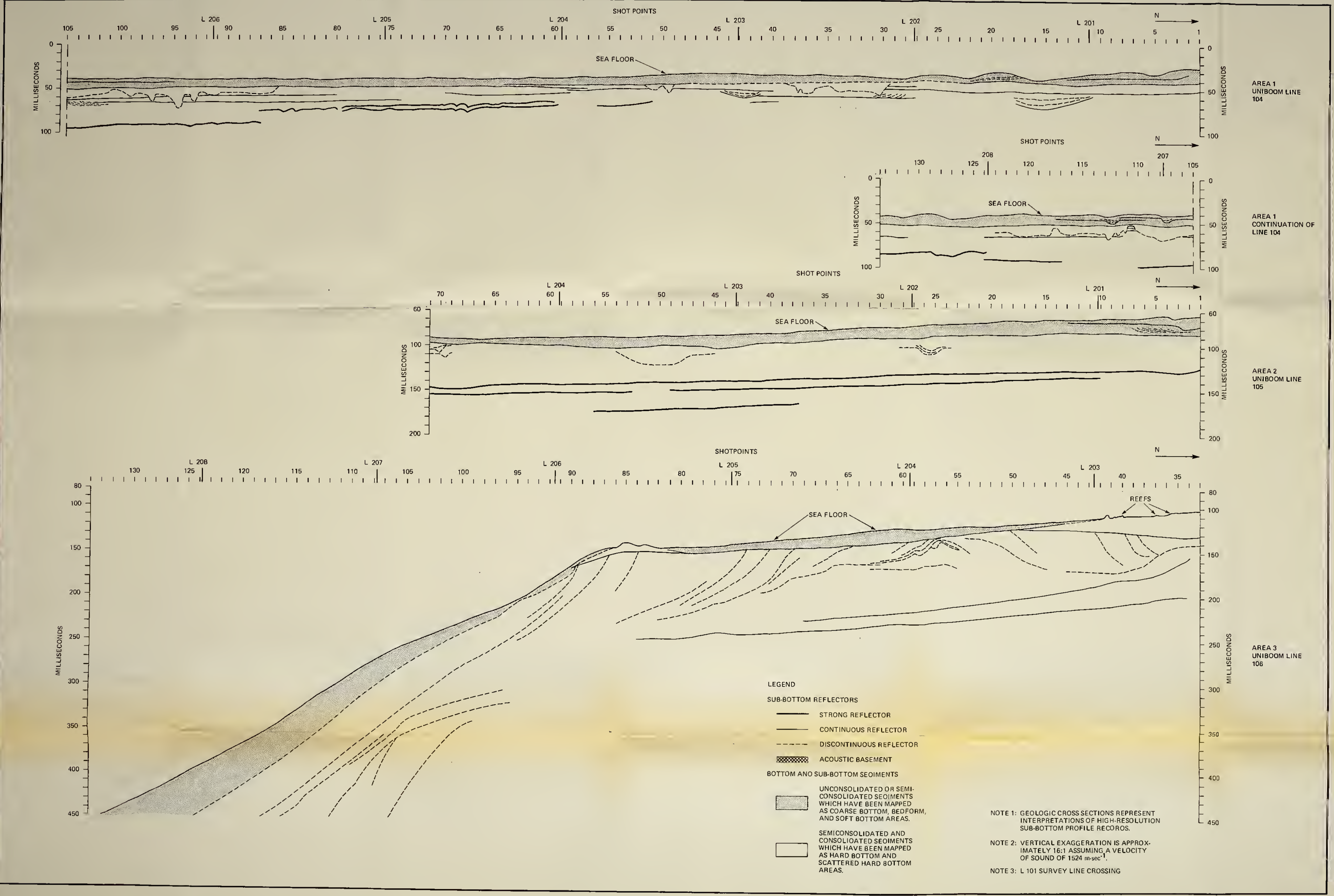
AREA:
CHARLOTTE HARBOR, BLOCKS
583, 584, 627, 628, 671, 672
715, 716

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 10 OF 10

DATE: OCTOBER 1978

PROJECT NO. 41069



LEGEND

SUB-BOTTOM REFLECTORS

▬▬▬	STRONG REFLECTOR
───	CONTINUOUS REFLECTOR
- - - -	DISCONTINUOUS REFLECTOR
▩	ACOUSTIC BASEMENT

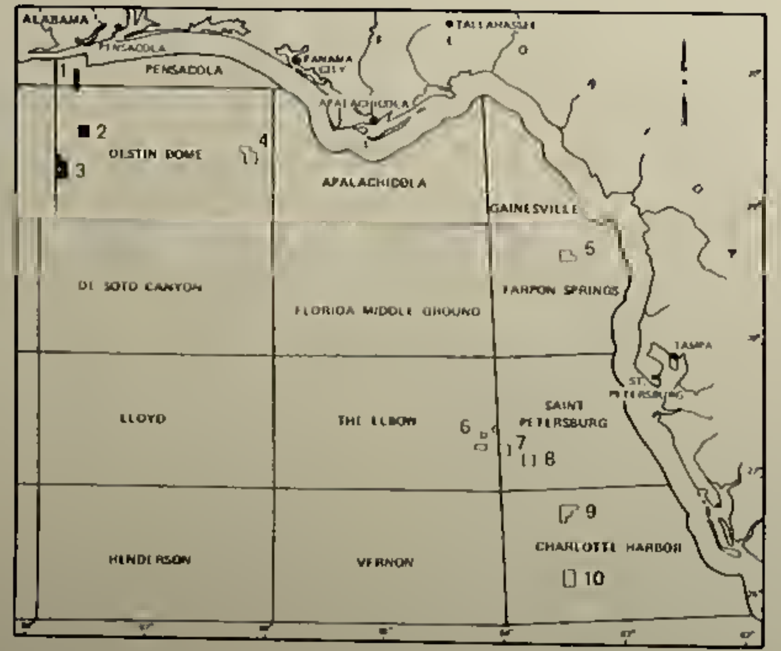
BOTTOM AND SUB-BOTTOM SEDIMENTS

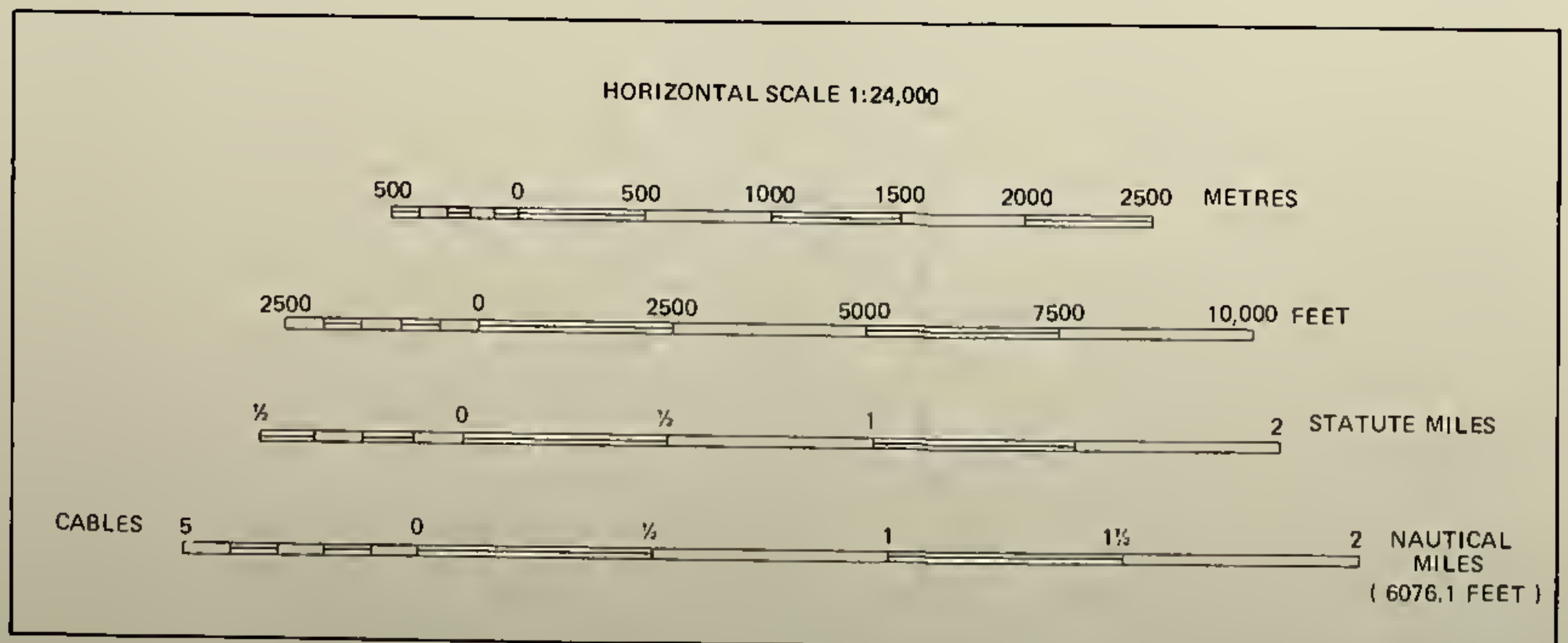
▒	UNCONSOLIDATED OR SEMI-CONSOLIDATED SEDIMENTS WHICH HAVE BEEN MAPPED AS COARSE BOTTOM, BEDFORM, AND SOFT BOTTOM AREAS.
☐	SEMICONSOLIDATED AND CONSOLIDATED SEDIMENTS WHICH HAVE BEEN MAPPED AS HARD BOTTOM AND SCATTERED HARD BOTTOM AREAS.

NOTE 1: GEOLOGIC CROSS SECTIONS REPRESENT INTERPRETATIONS OF HIGH-RESOLUTION SUB-BOTTOM PROFILE RECORDS.

NOTE 2: VERTICAL EXAGGERATION IS APPROXIMATELY 16:1 ASSUMING A VELOCITY OF SOUND OF 1524 $m \cdot sec^{-1}$.

NOTE 3: L 101 SURVEY LINE CROSSING





UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

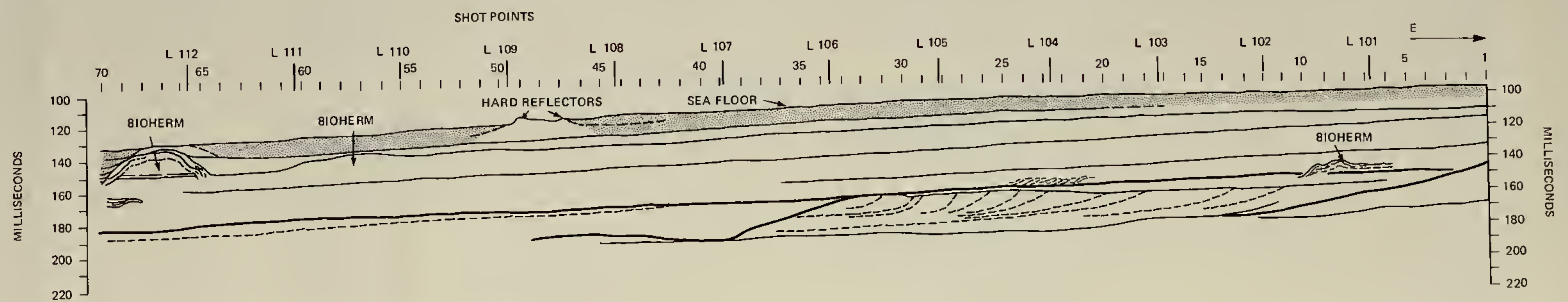
GEOLOGIC CROSS SECTIONS

AREAS:
1,2,3

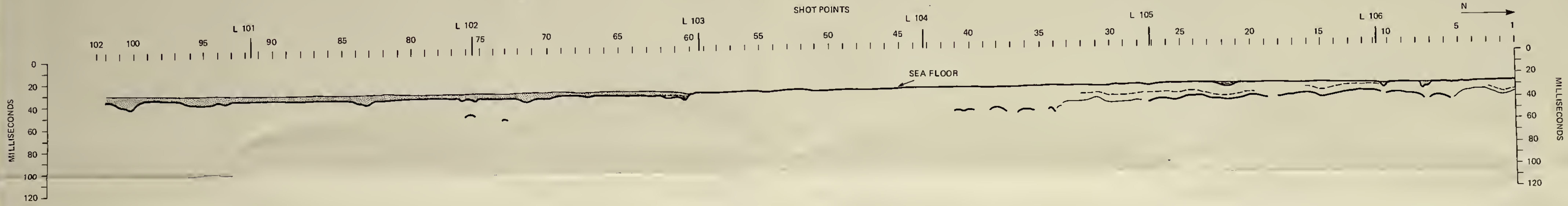
WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 1 OF 3

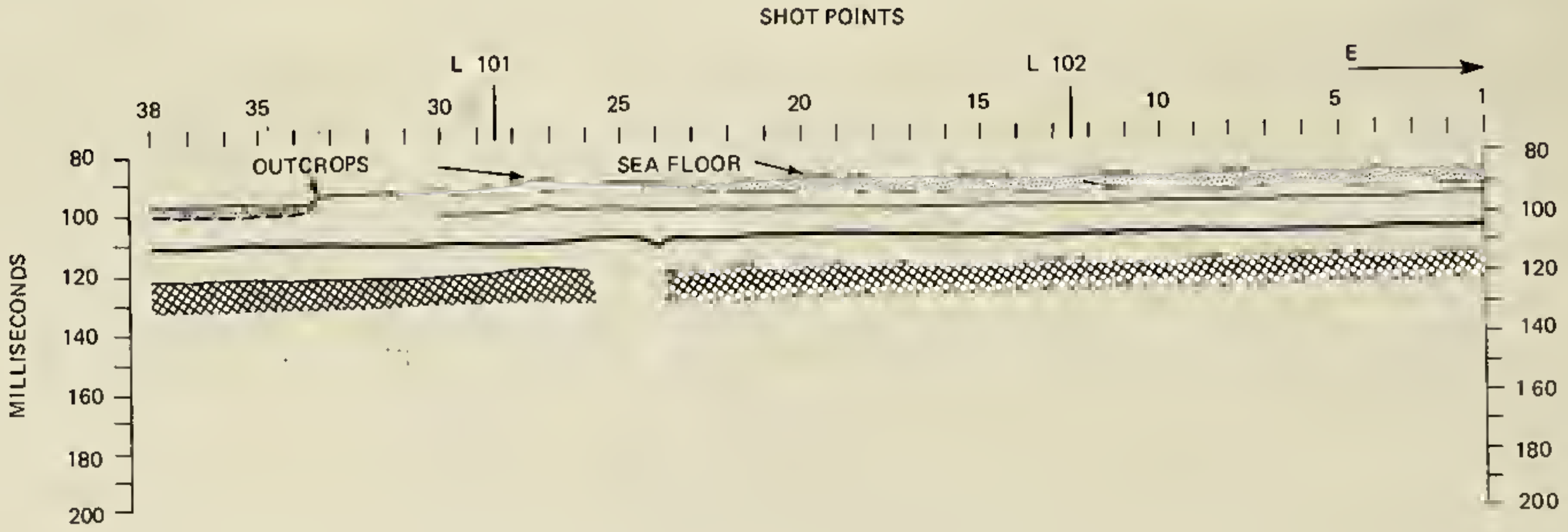
DATE: OCTOBER 1978 | PROJECT NO. 41069



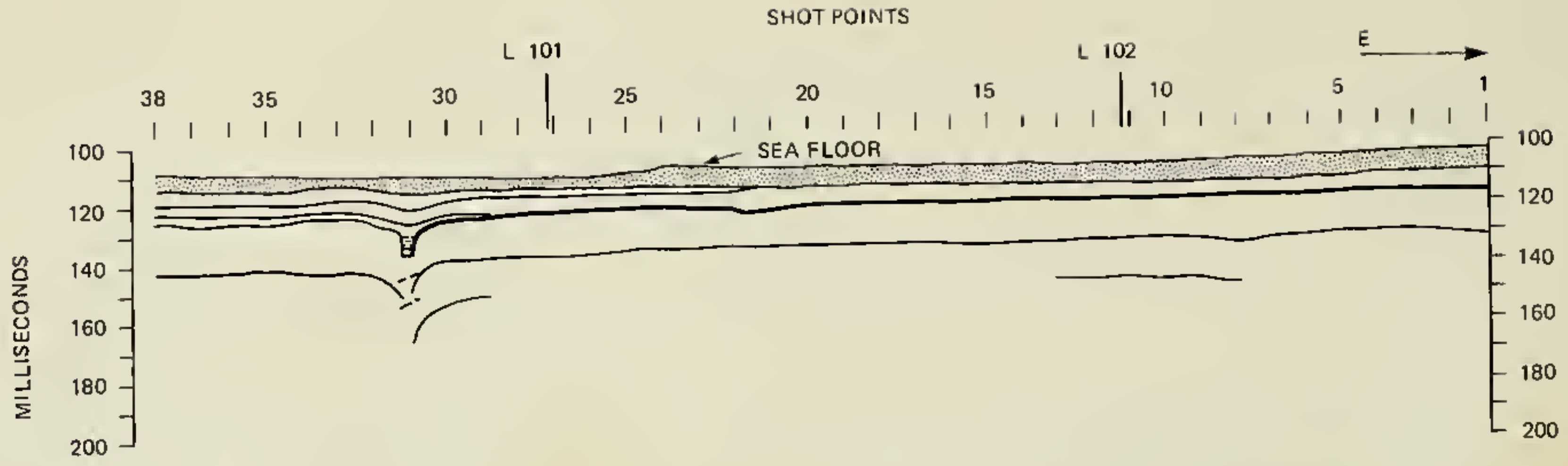
AREA 4
UNIBOOM LINE
205



AREA 5
UNIBOOM LINE
208



AREA 6
BLOCK 567
UNIBOOM LINE
204



AREA 6
BLOCK 609
UNIBOOM LINE
204

LEGEND

SUB-BOTTOM REFLECTORS

━━━ STRONG REFLECTOR

─── CONTINUOUS REFLECTOR

- - - - - DISCONTINUOUS REFLECTOR

▩ ACOUSTIC BASEMENT

BOTTOM AND SUB-BOTTOM SEDIMENTS

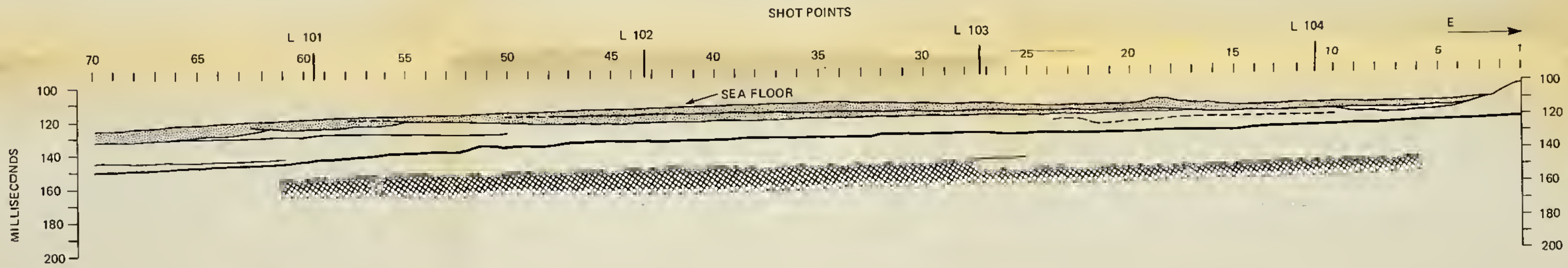
▒ UNCONSOLIDATED OR SEMI-CONSOLIDATED SEDIMENTS WHICH HAVE BEEN MAPPED AS COARSE BOTTOM, BEDFORM, AND SOFT BOTTOM AREAS.

▭ SEMICONSOLIDATED AND CONSOLIDATED SEDIMENTS WHICH HAVE BEEN MAPPED AS HARD BOTTOM AND SCATTERED HARD BOTTOM AREAS.

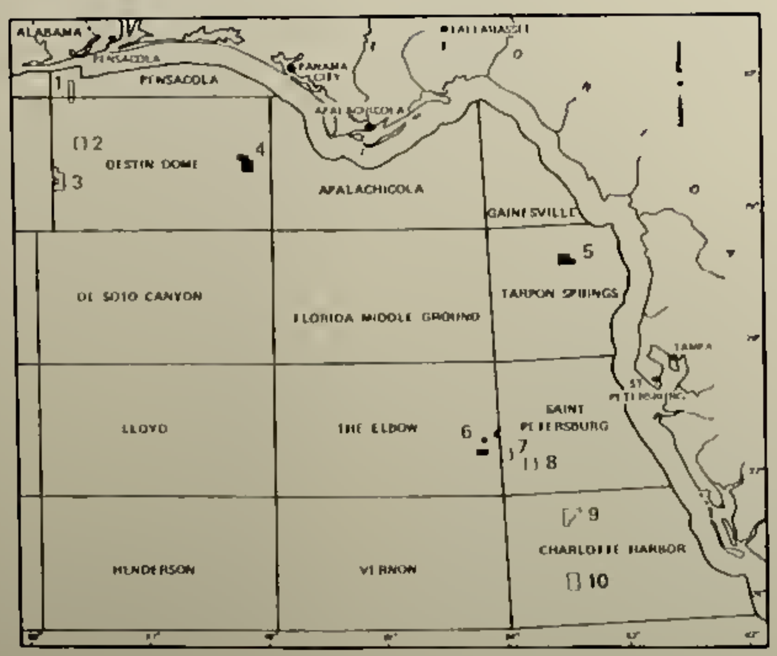
NOTE 1: GEOLOGIC CROSS SECTIONS REPRESENT INTERPRETATIONS OF HIGH-RESOLUTION SUB-BOTTOM PROFILE RECORDS.

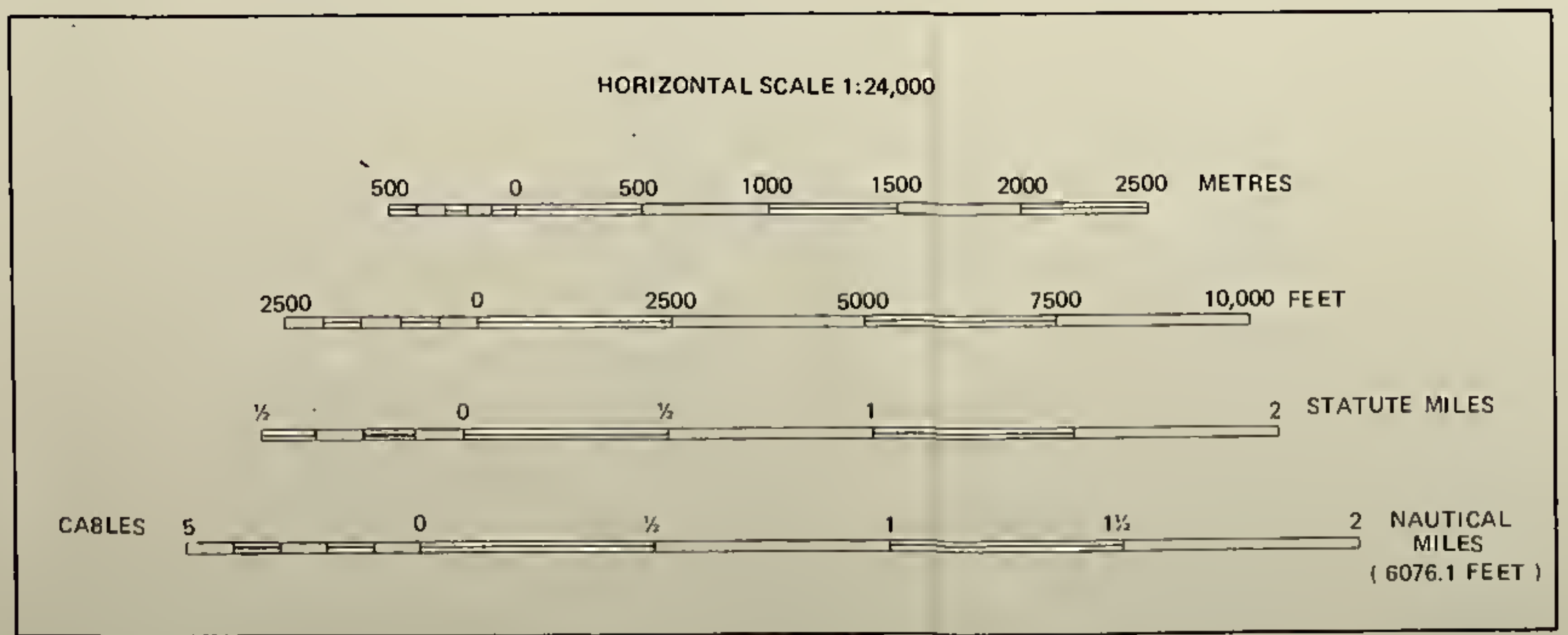
NOTE 2: VERTICAL EXAGGERATION IS APPROXIMATELY 16:1 ASSUMING A VELOCITY OF SOUND OF 1524 $m \cdot sec^{-1}$.

NOTE 3: L 101 SURVEY LINE CROSSING



AREA 6
BLOCKS 696, 697
UNIBOOM LINE
204





UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

GEOLOGIC CROSS SECTIONS

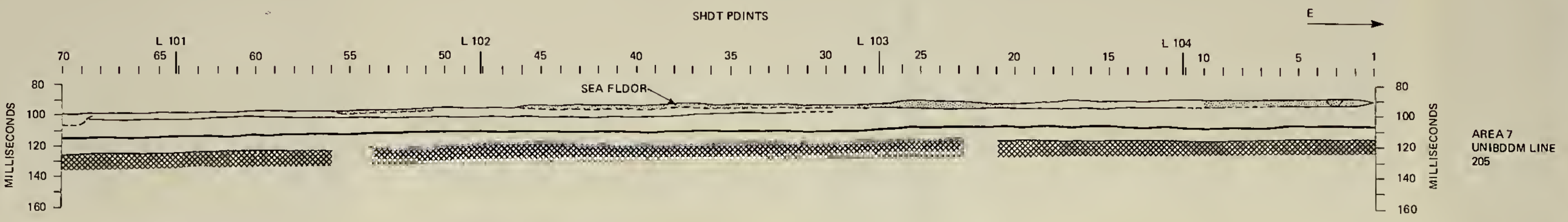
AREAS:
4,5,6

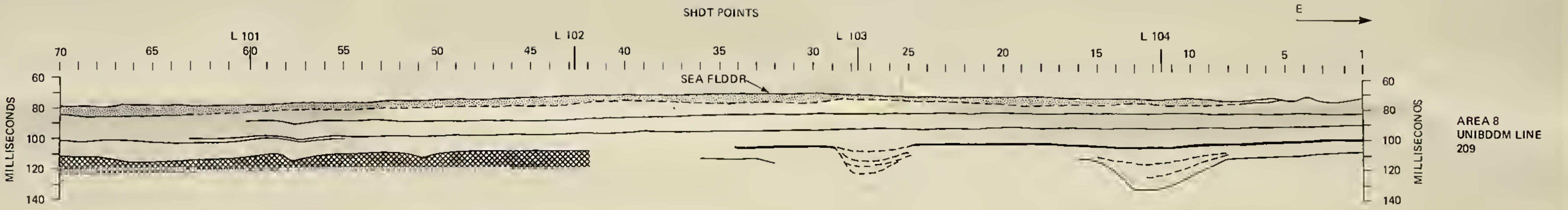
WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS, GEOLOGISTS
AND ENVIRONMENTAL SCIENTISTS

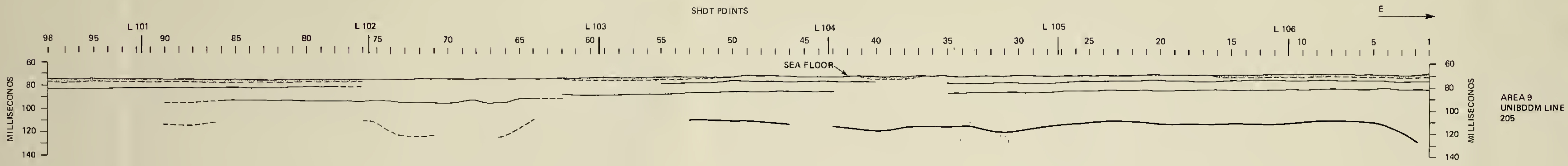
SHEET NO. 2 OF 3

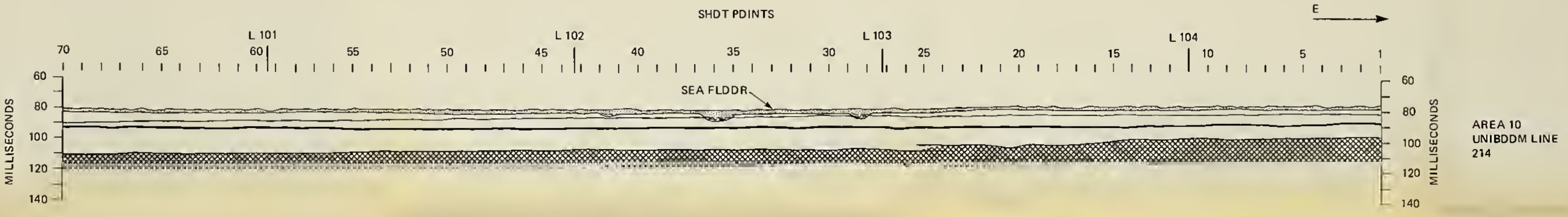
DATE: OCTOBER 1978

PROJECT NO. 41069









LEGEND

SUB-BOTTOM REFLECTORS

———	STRONG REFLECTOR
—·——	CONTINUOUS REFLECTOR
-----	DISCONTINUOUS REFLECTOR
▩	ACOUSTIC BASEMENT

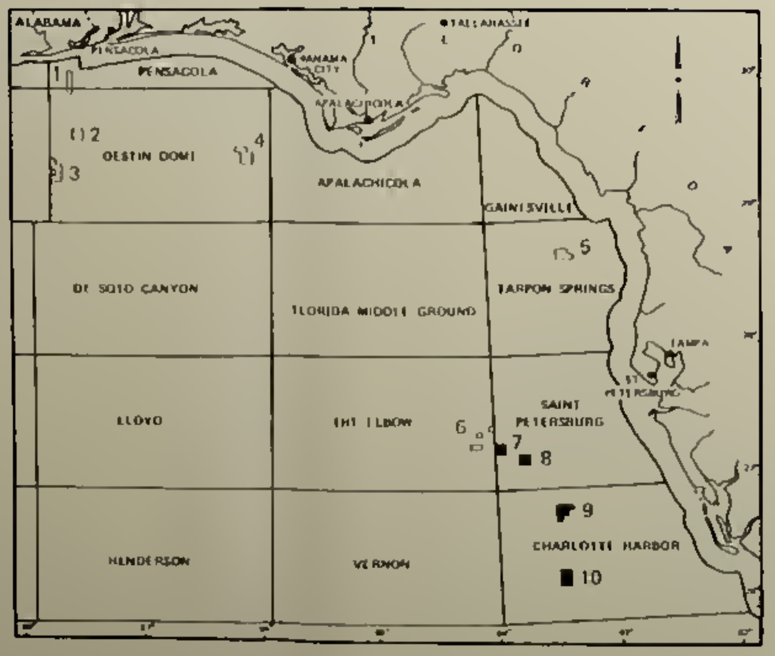
BOTTOM AND SUB-BOTTOM SEDIMENTS

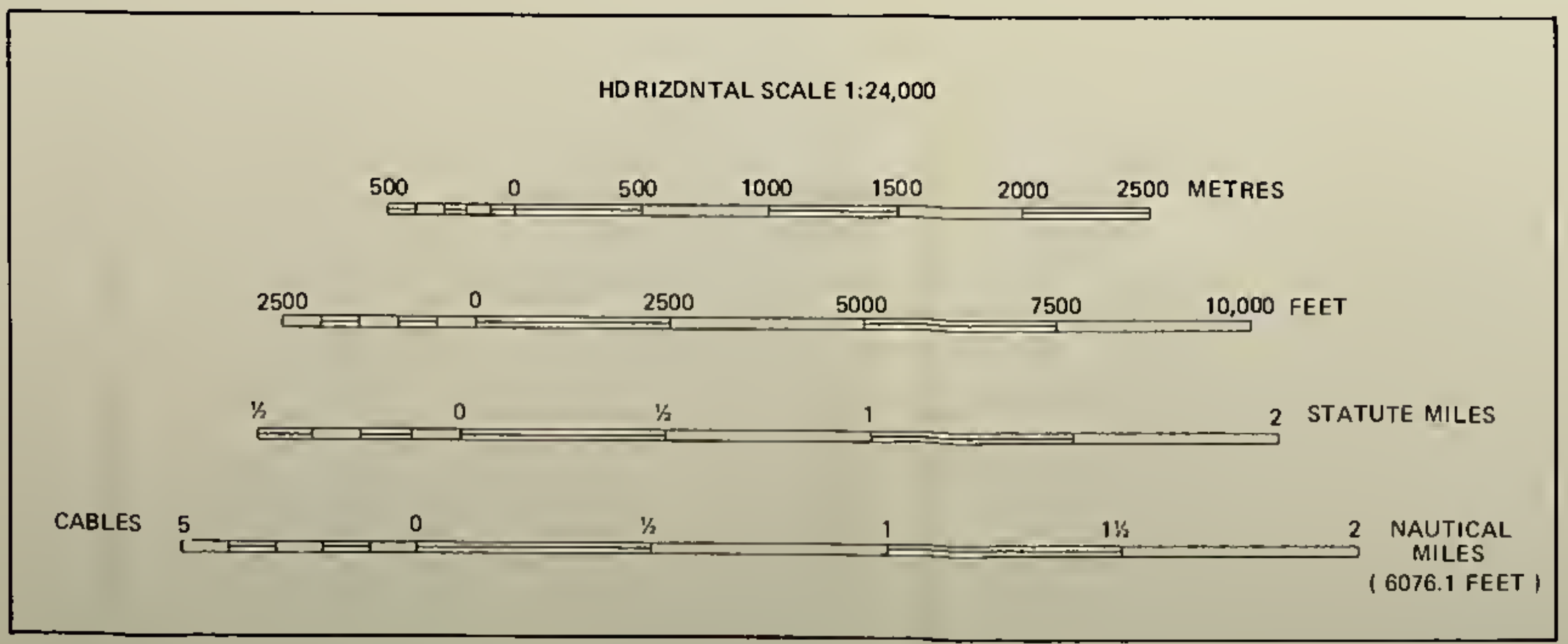
▒	UNCONSOLIDATED OR SEMI-CONSOLIDATED SEDIMENTS WHICH HAVE BEEN MAPPED AS COARSE BOTTOM, BEDFORM, AND SOFT BOTTOM AREAS.
☐	SEMICONSOLIDATED AND CONSOLIDATED SEDIMENTS WHICH HAVE BEEN MAPPED AS HARD BOTTOM AND SCATTERED HARD BOTTOM AREAS.

NOTE 1: GEOLOGIC CROSS SECTIONS REPRESENT INTERPRETATIONS OF HIGH-RESOLUTION SUB-BOTTOM PROFILE RECORDS.

NOTE 2: VERTICAL EXAGGERATION IS APPROXIMATELY 16:1 ASSUMING A VELOCITY OF SOUND OF 1524 $m \cdot sec^{-1}$.

NOTE 3: L 101 SURVEY LINE CROSSING




HORIZONTAL SCALE 1:24,000
500 0 500 1000 1500 2000 2500 METRES
2500 0 2500 5000 7500 10,000 FEET
½ 0 ½ 1 2 STATUTE MILES
CABLES 5 0 ½ 1 1½ 2 NAUTICAL MILES (6076.1 FEET)

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

NEW ORLEANS OUTER CONTINENTAL SHELF OFFICE

EASTERN GULF OF MEXICO MARINE HABITAT STUDY

GEOLOGIC CROSS SECTIONS

AREAS: 7,8,9,10

WOODWARD-CLYDE CONSULTANTS

CONSULTING ENGINEERS, GEOLOGISTS AND ENVIRONMENTAL SCIENTISTS

SHEET NO. 3 OF 3

DATE: OCTOBER 1978

PROJECT NO. 41069

Borrower's Card

GC
85.2
.M6
W66
v.2

Woodward-Clyde Consultants.
Eastern GUlf of Mexico Marine habitat study.

Date Loaned	Borrower	Division